FOOD AND FEEDING

SIR HENRY THOMPSON

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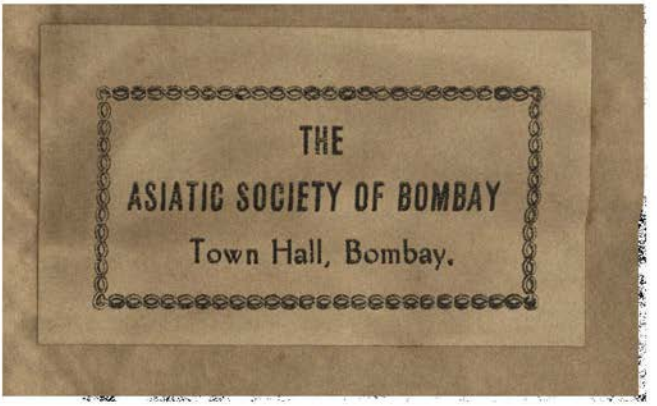

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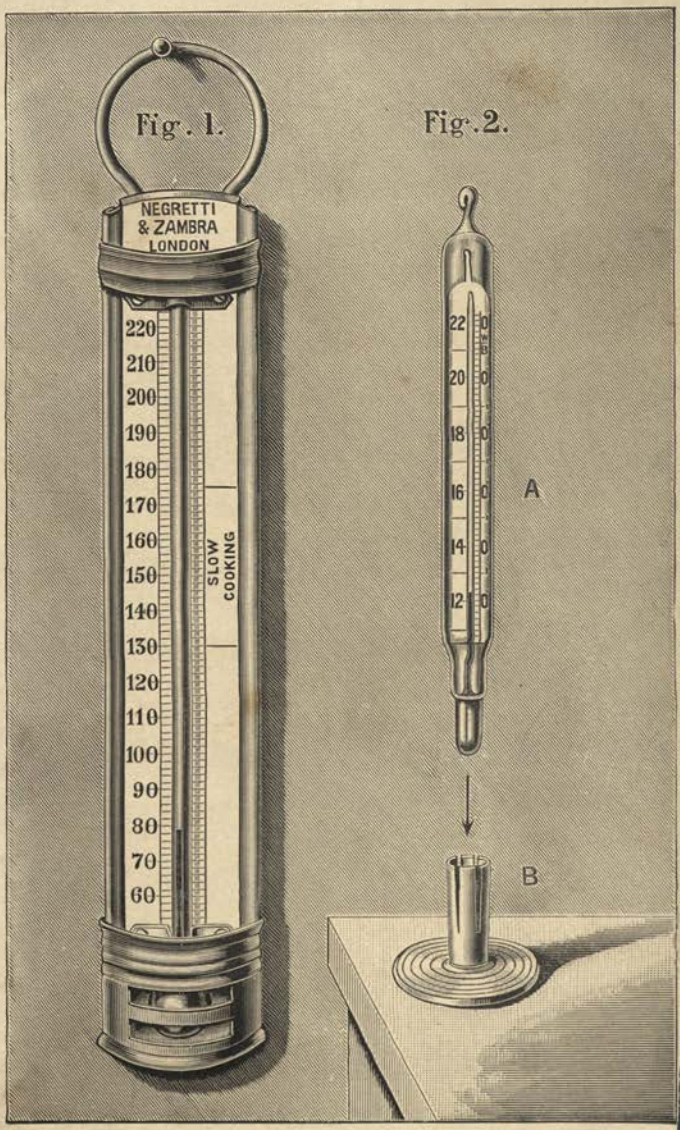

THERMOMETERS USED IN COOKING.

FOOD AND FEEDING

B 1729

BY

SIR HENRY THOMPSON

F.R.C.S., M.B. LOND., ETC.

WITH AN APPENDIX

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LONDON

FREDERICK WARNE AND CO.

AND NEW YORK

1898

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PREFACE TO THE NINTH EDITION

DURING the last few years several large editions of this book have been called for, and much new matter has been added to three or four of them.

The last edition has, however, been exhausted, and the work is out of print. I propose in this, my final edition, to bring the subject up to the present date, and to utter my last words respecting it. For scientific research, never ceasing to progress, has naturally added something to our knowledge of the digestive processes, as well as of the value to man of certain food-principles from which his body derives nutrition.

The art of cooking also has, like other arts, been sedulously cultivated by a few, leading to improvements in appliances and in the methods to be adopted for the preparation of a wholesome and agreeable diet. Moreover, the selection of food and the preparation of it for the table are far more widely understood and appreciated now than they were when the little volume first appeared nearly twenty years ago.

In the present and enlarged edition I have attempted to classify the various processes employed in cookery and its staple products in a more complete and natural order than heretofore, and to explain more fully the principles on which they are employed, the objects aimed at, and the rationale of each procedure.

The subject of "slow cookery" is one which I have practically studied of late with much interest, and I have recorded the result of various experiments. I am satisfied that in cooking food, especially that derived from the animal kingdom, the longer application of low temperatures will render it more easily digestible and nutritious, as well as more agreeable than the old methods. By these latter I mean the long-established custom of cooking "joints" by the highest temperature obtainable through boiling water, or radiation from a fire in the course of two or three hours, viz. the familiar processes of "boiling" and "roasting" respectively.

I venture to hope that the numerous elementary observations and practical hints relating to the very wide subject of Food and Feeding which have thus been brought together may prove useful, and tend to promote a still wider appreciation of one of the most important and interesting branches of inquiry demanded by the necessities of life and social intercourse.

35, Wimpole Street,
June, 1898.

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FOOD AND FEEDING

CHAPTER I.

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Choice of food an important study.

I THINK I shall not be far wrong if I say that there are few subjects which deserve more careful study by man than the selection and preparation of his food. Our forefathers in their wisdom have provided, by ample and generously endowed organizations, for the dissemination of moral precepts in relation to human conduct,

and for the constant supply of sustenance to mee
the cravings of religious emotions common to a
sorts and conditions of men. In these provisions n
student of human nature can fail to recognize th
spirit of wisdom and a lofty purpose. But it is not
sign of ancestral wisdom that so little thought ha
been bestowed on the teaching of what we should ea
and drink; or on the relations necessarily existing
not only between food and a healthy population, bu
between food and a virtuous life.

Indeed, the process of digestion and the influenc
it exerts on the sources of mental and moral power
have received little attention in any scheme for
fitting men and women for the practical duties o
life. No doubt the truth has long been accepted, a
all events by intelligent persons, that a man's temper
and consequently the character of his actions, often
depend on the contingency that what he eats is pro-
perly converted, or not, into healthy material, suitable
for the ceaseless work of building up both muscle
and brain. But the truth of that fact
has never been generally admitted to an
extent at all comparable with its exceed-
ing importance. It produces no practical result
on the habits of men in the least degree com-
mensurate with the claim it has to be believed and
acted upon. For it is certain that an adequate prac-
tical recognition of the value of proper food to the
individual in maintaining a high standard of health,
in prolonging healthy life (the prolongation of

The relation between food and character.

unhealthy life being small gain either to the individual or to the community), and thus largely promoting cheerful temper, prevalent good nature, and improved moral tone, would achieve almost a revolution in the habits of a large part of the community.

The general outlines of a man's mental character and physical tendencies are doubtless largely determined by the impress of race and family. That is to say, the scheme of the building, its characteristics and dimensions, are inherited; but to a very large extent the materials and filling in of the individual's framework depend, in regard of their quality, upon his food and training. By the latter term may be understood all that relates to mental and moral and even to physical education, assumed to be fairly provided for, and not to be considered here. No matter, then, how consummate the scheme of the architect, nor how vast the design, more or less of failure to rear the edifice results when the materials are ill chosen or for the most part unworthy to be used. Other sources of failure there may be which it is no part of my business to note; but the influence of food is not only itself cardinal in rank, but, by priority of action, is the source of various forces, injurious or the reverse, as the case may be.

Influence of race.

Influence of food and training.

A very slight sketch of the course of development observed in the most ordinary types of human life will suffice to illustrate this truth.

Errors in feeding infants.

To commence, then, I fear it must be admitted that the majority of British infants are reared on imperfect milk by weak or ill-fed mothers. And thus it follows that the signs of feeble vitality, of fretful disposition or of disease, may be observed at a very early age, and are apparent in symptoms of indigestion or in the cravings of want manifested by the "peevish" and sleepless child. In circumstances where there is no want of appropriate nutriment, over-feeding or complicated forms of food, suitable only for older persons, produce for another infant troubles which are no less grave than those of the class whose supply is impure or deficient.

Children often ill-fed,

In the next stage of life, when infancy has been passed and childhood is attained, among the poor, the little one takes his place at the parents' table, where lack of means, as well as of knowledge, deprives him of food more suitable than the rough fare of the adult, and moreover obtains for him, perchance, his little share of tea, or even of beer or gin. On the whole, perhaps he is not much worse off than the child of the well-to-do, who becomes a pet, and is already familiarized with complex and too solid forms of food, as well as with stimulating drinks, which custom and self-indulgence have placed on the daily table. And soon afterwards commence in consequence—and entirely in consequence, a fact it is impossible too much to emphasize

means frequent indisposition;

—the "sick headaches" and "bilious attacks," which pursue their victim through half a lifetime, to be exchanged for gout or worse at or before the grand climacteric. And so common are these evils that they are regarded by people in general as a necessary appanage of "poor humanity," and together with measles or hooping cough, to be part of the natural and necessary development of the full-grown and complete man! No notion can be more erroneous, since it is absolutely true that the complaints referred to are self-engendered, form no necessary part of our physical nature, and for their existence are dependent almost entirely on our habits in relation to food and drink. I except, of course, those cases in which hereditary tendency is so strong as to produce certain evils, some special care notwithstanding, exercised on behalf of the unfortunate victim of an ancestor's self-indulgence. Equally, however, on the part of that little-to-be-revered progenitor were ill-chosen food and drink, or more probably an excessive indulgence in the quantity thereof, the cause of his disease, and not the physical nature of man.

most complaints so caused.

The next stage of boyhood transfers the child just spoken of to a public school, where too often insufficient or inappropriate diet, at the most critical period of growth, has led to the habit of supplementing the supply from other sources. It is almost unnecessary to say that chief among them are those unsuitable purveyors, the

Improper food at school.

pastrycook and the vendor of portable provisions, with their wares of questionable character consumed not at meal times, but at irregular hours. Many an unhappy dyspeptic owes his complaint to a confirmed habit of taking such, or indeed any food in the intervals between regular meals, when the stomach ought to be at rest.

Early habits of drinking.

After this period arise the temptations to drink, among the youth of all classes, whether at beerhouse, tavern, or club. For it has been taught in the bosom of the family, by the father's example and by the mother's precept, that wine, beer, and spirits are useful, nay, necessary to health, even for young persons, and that they augment or sustain the strength. And the lessons thus inculcated and too well learned have proved to be the steps which lead to wider experience in the pursuit of health and strength by larger use of the same means. Under such circumstances it often happens, as the youth grows up, that a flagging appetite or a failing digestion habitually demands a dram before or between meals, and that these latter are regarded rather as occasions to indulge in variety of liquor than as repasts for nourishing the body. It is not surprising, with such training, that the true object of both eating and drinking is entirely lost sight of. The gratification of acquired tastes usurps the function of that zest which healthy appetite produces; and the intention that food should be adapted to the physical needs of the body and the healthy

action of the mind is forgotten altogether. So it often comes to pass that at middle age, when man finds himself in the full current of life's occupations, struggling for pre-eminence with his fellows, indigestion has become persistent in some of its numerous forms, shortens his "staying power," or impairs his judgment or temper. And, besides all this, how apparent it is that few causes are more potent than an incompetent stomach to engender habits of selfishness and egotism. A constant care to provide little personal wants of various kinds, thus rendered necessary, developes the growth of these sentiments, and they influence the man's whole character in consequence. On the other hand, the poor man, advancing in years, shows signs of damage to his constitution from continuous toil with inadequate food, the supply of which is often diminished by his expenditure for beer, which, although not seldom noxious, he regards as the elixir of life, never to be missed when fair occasion for obtaining it is offered. Many of this class are prematurely crippled by articular disease, etc., and become permanent inmates of the parish workhouse or infirmary.

Evils of early indigestion thus,

and otherwise caused.

It must be obvious to every one how much more of detail might be added to fill in the outlines of this little sketch. It is designed rather to be suggestive than complete, and thus it amply suffices for my purpose; other illustrations will occur to any observer who cares to pursue the subject further.

"Taste" in food to be cultivated.

But it is necessary to say here, and I desire to say it emphatically, that this question of food need not, even with the views just enunciated, be treated in an ascetic spirit. The selection of food is to be considered in relation to a principle, in which we may certainly believe, namely, that aliments most adapted to develop the individual, sound in body and mind, shall not only be acceptable to the palate, but that they may be selected and prepared so as to afford scope for the exercise of a refined taste, and produce a fair degree of an innocent pleasure naturally associated with the act of eating, and derived from a study of the table. For it is certain that most of the results of culinary taste met with in English society until late years, has often been the result of faith without knowledge; and no more a source of gratification to the eater's gustatory sense than of digestible sustenance to his body.

An interesting subject thus studied.

The subject of this little work will therefore take the following form in regard of the matter, and the method of considering it. Food must first be regarded in relation to its value as material to be used for building up and sustaining the activity of that composite structure, the human body, under the varied conditions in which it may be placed. Secondly, the selection of food, and the best modes of preparing it, resulting in the production of "the dish," a subject of great

1. Uses of food to the body.

2. Modes of preparing "a dish."

extent and importance, must be dealt with so far as the limits of my design will permit. Lastly, the exercise of taste in relation to the serving of food and drink, or the art of combining dishes to form "a meal," must also be considered in relation to various purposes.

3. Art of combining dishes for "a meal."

We have to consider, first, what constitutes food for man. Its objects are threefold—to repair the daily waste of the body itself, a necessary consequence of life and its activity; to maintain the natural heat of the body, always in our climate a temperature many degrees above that of the surrounding media, whether earth, air, or water; lastly, to provide the means of supplying energy to support an active existence.

The objects of food.

For this purpose, fresh elements similar to those of which the body is composed, must be furnished to it in such form and proportions as to repair the loss. Additional elements must be supplied, by the oxidation of which more heat and energy are produced in proportion to the existing demand. All these are only to be obtained through digestion, and must be acquired in response to the instinctive demands of hunger and thirst.

Necessary elements.

These elements are regarded as divisible into four distinct classes, as follows:—

1. The Proteids.—This group contains an essential element for renewing the tissues of the body, named "protein," without which life is impossible, since starvation must take place

1. The proteids:

unless a sufficient quantity is supplied by food. It is a definite compound of carbon, oxygen, and hydrogen with nitrogen, but often associated with a little sulphur and phosphorus also. "Proteids" are found in all animals used as food by man; and also in many productions of the vegetable kingdom—from which two sources the body can alone be supplied. We find the proteid element abundantly in lean meat, the muscle of animals, where it is known as "myosin," also in the blood and other parts as "fibrin." There are, moreover, two modifications of nitrogenous compounds allied to, but not identical with, true proteids, viz. "gelatin" and "chondrin," in bones and cartilage respectively. Proteids are largely present in eggs, forming "albumen," or what is familiarly known as the "white of eggs;" and in milk as "casein," the nitrogenous constituent of cheese. Again, in wheat, and existing therefore in bread, in smaller proportion, as "gluten;" and in the leguminous seeds (peas and beans) abundantly, as "legumin," which is almost identical with "casein."

from animals;

from vegetables.

2. The hydro-carbons, or fatty matters, carbon, hydrogen, and oxygen, in a certain proportion, are also necessary for nutrition; and these may be obtained also from both animals and vegetables.

2. The hydro-carbons.

3. Carbo-hydrates, also carbon, hydrogen, and oxygen, but in different proportions from those of the preceding class, not

3. The carbo-hydrates.

absolutely essential to life like the proteids, although they are most desirable elements of food. They are largely furnished by the vegetable kingdom, consisting chiefly of the starches of all grain, roots, and tubers, with the sugars and the gums; in milk they exist as milk sugar, or "lactose."

4. Lastly, there are certain products no less essential than the first class, all belonging solely to the inorganic or mineral kingdom, namely, water in large quantity, with various salts of soda, lime, magnesia, potash, traces of iron, and other metals. All these must be present in the food supplied, and are obtained in all ordinary forms of food from both animal and vegetable sources.

4. Inorganic elements: water, salts, etc.

Meantime, as a result of chemical changes which take place in every portion of the body through the assimilation of all these elements, chiefly by oxidation, heat is produced; while not only the proteids, but also the fatty matters and the carbo-hydrates of our food, as well as the inorganic constituents, are utilized in the repair of wasted tissues.

How utilized.

Thus we may regard the human body as a complex and highly organized machine, adapted to execute work of varied but specific kind, but one which is self-supplying by means of food, and also automatically regenerates itself in order to maintain a condition of good repair.

A complex machine, self-supplying and repairing.

Thus, any material which is competent to supply

these requirements is a complete or perfect food. Examples of complete food exist in milk and the egg, sufficing as these do for all the wants of the young animal during the period of early growth. Nevertheless, a single animal product like either of the two named, although complex in itself, is not more perfect than an artificial combination of various simpler substances, provided the mixture (dish or meal) contains all the elements required in due proportion for the purposes of the body.

Now, as above seen, all these constituent elements of the food, the proteids, the fats, and the carbohydrates, together with the inorganic salts, may be obtained both from the animal and vegetable kingdoms.

Animal sources,

The wide range of animals available in the endless forms of "flesh, fish, and fowl," to name them in popular terms, need not be further enumerated at present. This subject will be more fully considered hereafter.

Vegetable sources,

The vegetable kingdom may be held to comprehend the following list: the cereals, namely, wheat, oats, barley, maize, rice, etc.; the legumes; the nuts and their oil; roots and tubers; starches, gums, and sugars; green vegetables, herbs, and fruits.

vary in value and in quantity.

But there is a marked difference in the kind of provision afforded on comparing the products of the two kingdoms. While the vegetable kingdom is conspicuous for the plenty and value of the carbo-hydrates present,

it will be seen that the proteids, as well as the fats, are not only less bountifully supplied, but exist in a form generally not so well adapted for man's digestion as those which are obtained from the animal kingdom. The most valuable proteid of the vegetable kingdom, since it is easily assimilated by the human stomach, is furnished in moderate quantity by certain members of the cereal class above named, viz. "gluten," and is consumed for the most part here in the form of wheaten bread. Next comes the extensive order of leguminous plants, beans, peas, and lentils, which, containing a very considerable amount of the proteid "legumin," or "vegetable casein," furnish cheap and excellent food, although inferior to wheaten bread, which contains less of the nitrogenous element. It is quite true that chemical analysis shows the presence of a larger proportion of that element, the legumin, in dried peas, lentils, or haricots, than is found in an equal weight of butcher's meat, of its corresponding proteid. But, on the other hand, none of the former furnish a proteid in so digestible a form as that of beef or mutton, many human stomachs failing to digest easily the leguminous product.* From the flesh of animals man acquires its

Gluten.

Legumin.

* For further information respecting this indubitable fact, see the work below named, where it is attentively and impartially considered. The tabulated result is given of carefully made experiments by Fr. Hofmann, on the power of man's digestive organs to assimilate the nitrogenous elements (albumen) from animal and vegetable sources respectively. From the data

products readily, and if he happen to be a delicate invalid, unable to digest solid food, an infusion of the meat, together with some *purée* of the flesh, will yield sustenance of the greatest value in an easily assimilated form. No such treatment of the beans will produce an equivalent, and their special proteid "casein," like cheese, its congener in milk, is then quite unsuitable. The lower animals, living on vegetables only, have stomachs and allied organs widely differing from our own, specially adapted to deal with vegetable foods, and to convert them into flesh. Thus it is that oxen and sheep, exclusively vegetable feeders as they are, consuming only grass and a few roots, produce largely and rapidly the necessary proteids in the form of flesh, as man himself is wholly incapable of doing, and meat thus becomes for him a concentrated food of exceeding value, admirably adapted to his digestive system. The need for an abundant supply of easily digestible proteids to sustain the hard-working inhabitants of the British islands is obvious. And hence it is, that almost all those who ordinarily

Superiority of animal proteids.

Valuable to the labourer.

supplied, it appears that while four-fifths of the albumen consumed from animal sources are digested (81 parts in the 100), not quite half (46·6 in the 100) is digested of albumen derived from vegetable sources, cereals, legumes, etc. This is corroborated by other experiments made by Rubner.

"Food in Health and Disease," by I. Burney Yeo, M.D., F.R.C.P., Physician to King's College Hospital, etc. (Cassell, 1896), p. 148, *et seq.*

classify themselves as "vegetarians," a numerous body of earnest adherents to a rule which forbids them to eat flesh, are mostly compelled to consume not only milk, butter, and cheese, but also eggs,* all of which are nevertheless choice foods from the animal kingdom. In these the proteids are largely present, also fats in abundance, and in forms better adapted to the human stomach than are olive-oil, cotton-seed oil, and various nut-oils, the fats of the vegetable world.

Hence "vegetarians" use them largely, and fats also.

It is most desirable, therefore, that an intelligible definition should be framed to indicate accurately the diet thus erroneously described as "vegetarian." This can only [illegible]ote a dietary containing foods pro[illegible]ed by the vegetable kingdom, and [illegible] by no possibility be accurately, that is, honestly, [illegible]ed to include anything else. At any rate, it must, [illegible]fore all things, exclude the use of the specific [illegible]oteids and fats, which animals have produced in [illegible] concentrated form (milk) for the pur[illegible]se of insuring a healthy, rapid, and [illegible]nerous growth for their offspring, [illegible]hen they are too young to eat any vegetable food, [illegible]d could not digest it if they did. In no single

"Vegetarian," a misleading and inaccurate term as used by a large class.

Milk, concentrated animal food,

* Every egg contains a chicken! that is, the entire material [illegible]herewith to make one; and requires nothing to produce a [illegible]ving animal but a little rise of temperature, 103° or 104° Fahr., [illegible]ther naturally or artificially applied.

instance is the young of the mammals, to which order man belongs, capable of feeding on any vegetable product, whether natural or artificially blended, during infancy and early childhood. And when the mother's milk is deficient, or naturally ceases, that of the cow, slightly modified, but containing animal proteids, fats, carbo-hydrates, and salts, best serves to maintain healthy condition, and confer full growing power on the young and active animal. All forms of vegetables are non-digestible by the infantile organs, and when given too early, as they not infrequently are, produce great disturbance, diarrhœa, colic, and, by no means rarely, fatal results. Not until some teeth have appeared is the child, as a rule, ready to make its first trial of vegetable food, and, for the first year, or even more, of life, it will generally thrive better on wholesome milk than any substitute. Thus man is born in the world a consumer of animal food, and it is for the "vegetarian" to show cause for determining at what age, if at any, he should henceforth be compelled to restrict himself to a diet from the vegetable kingdom.

necessary for infant life throughout the mammals.

Man born an animal feeder.

In another form of abstention—viz. that from alcohol in all its forms—which has been of great service, and might be far more largely extended with incalculable advantage to the community, the practice is clear and defined. The "total abstainer" means what he says, and does not take his daily c

occasional glass of wine or beer unless strongly advised by his doctor, and by no means always then. The term "vegetarian" will, assuredly, soon cease to have a meaning, if clearly drawn definitions be not adopted to distinguish the man who consumes only products of the vegetable kingdom, from the man who adds thereto the animal proteids and fats which exist richly in eggs, in milk and its derivatives. The two individuals support life on wholly different dietetic principles; the latter being certainly a "mixed feeder" and not a vegetarian. It is no part of my duty to discover an appropriate definition; but, in view of the present loose practice in regard to dietary, the terms "a vegetarian" and simply "a flesh abstainer," appear correctly to indicate respectively the two classes I have described.

"Vegetarian," adopted as it is for those who consume a mixed diet, really means no more than "flesh abstainer."

And here let it be remarked that there are individuals, a few perhaps, in this country, who are *strictly* vegetable-eaters; while large populations exist on little else in the tropics, where a small proportion of animal food only is consumed, and that mostly fat. On the other hand, in northern latitudes, little or nothing besides animal food is attainable, and a vegetarian diet, if procurable, would not sustain life in those regions. For climate is an important factor in relation to food. Man, wherever he exists, has to maintain his body at a constant

Many are almost true vegetarians in the tropics. In high latitudes the vegetarian cannot exist,

temperature of at least 98° Fahr.; and it is obvious that an enormous difference must exist between the needs of the individual who lives near the equator with all surrounding objects, at a constant temperature of 85° to 95°, and those of one who inhabits northern latitudes, where it is continuously below the freezing-point, 32°, often to the extent of many degrees. In each case the temperature of the body must be maintained at 98°, or a little more, or man will cease to exist. In the large and populous zone we inhabit, which forms so extensive a portion of Europe, Asia, South Africa, America, and Australasia, and is known as the "Temperate Zone," there are very few persons, indeed, who can sustain their health and a fair amount of strength for many years on a strictly vegetable diet. I have met with a few, but a very few, individuals who have been able to assure me that they have long enjoyed continuous good health and strength upon a diet of bread, made solely from flour or meal of any kind, and water, the best green vegetables, roots, and fruits, avoiding all milk, butter, cheese, and eggs. Hence, it is only possible to regard man—considered as an inhabitant of the world at large—and manifesting as he does a strong and increasing impulse to explore and colonize any part of the globe, as now naturally omnivorous; in other words, possessed of a constitution which requires a mixed diet of animal and vegetable foods for his well-being.

and very few can live in the temperate zones.

Man is naturally omnivorous.

in relative proportions varying according to temperature and activity of life.

This conclusion is not to be determined by inferences drawn from the nature of his teeth, which may perhaps offer some indications, but by no means any decisive evidence respecting the question, although the character of his stomach and intestinal canal prove the accuracy of the statements here made. In any case, anatomical evidence only indicates the results of a long course of development in the organs of a given animal, adapting it to the circumstances by which it has been surrounded, with the accommodations of structure which have enabled it to survive in its struggle for existence, to occupy a prominent place in the fauna of its country. The history of man's passage through the stages of what is understood by civilization, indicates that he has gradually extended his resources in the matter of food, and has long been omnivorous to the extent which circumstances have permitted. The present condition of his digestive organs as a whole is but the expression of what his environments and his energy through long ages of evolution have made him.

Anatomical evidence.

In the same manner, the great vegetable feeders have acquired special arrangements already referred to in the "compound stomachs" of the numerous and important varieties of "ruminating" animals; and some, like the rabbit, for example, have an enormously large

Anatomical peculiarities of the vegetable feeders.

cæcum, which is utilized for the digestion of the bulky green food they consume; while the corresponding organ in the human subject exists in little more than name, being merely a slight dilatation of the large intestine.

For it is a significant and important physiological fact, that the digestive apparatus of an animal must correspond to the extent of change which its food has to undergo in order to convert it into the flesh which constitutes the animal consuming it.

Thus if grass, which is very low in the scale of vegetable growths, has to be converted into the highly composite animal fibre constituting beef and mutton, a long and complicated apparatus is required. It consists of four stomachs, from the first of which after eating, the food is returned into the mouth during the act of "chewing the cud," after which it is transmitted in turn through the other three, a process which confers the characteristic distinction of "ruminant" upon the animals referred to. No human stomach under any circumstances has the power of effecting the changes in question.

The carnivore, living exclusively on flesh, requires for his purpose nothing more than the digestion and assimilation of animal tissues identical with those already composing his own body. This process, compared with that above described, is a very simple one; and accordingly the stomach and digestive organs are far less complex in structure.

Man holds a position between the two extremes,

with his varied surroundings and his ability to select and adapt; for he possesses the power to support life by consuming the best products of the vegetable kingdom, and also all animal foods, suitable to his purpose and tastes. The animal fibres of fishes, birds, and tender meat, with the concentrated extracts of the latter, being identical in nature and form with the structures of his own body, are assimilated with greater ease than the nitrogenous products of the vegetable kingdom. His digestive apparatus is more highly developed than that of the carnivore, but more closely resembles it than the complicated apparatus of the exclusively vegetable feeder.

Man is therefore manifestly adapted for a mixed diet from the animal and vegetable kingdom, and must be regarded beyond all controversy as an omnivorous animal.

In respect of teeth, stomach, and intestine, the human type closely corresponds with that which predominates among the various species of monkey, the cæcum being rather larger in monkeys than it is in man. Monkeys are often spoken of as living exclusively on vegetable diet, but this is very far from the truth. Moreover, the four genera of anthropoid apes which more nearly approach man than any other, viz. the gibbons, the orang-outang, gorilla, and chimpanzee, in a state of nature obtain their sustenance from both animal and vegetable sources.* The numerous

The monkey tribes are mixed feeders.

* See "Anthropoid Apes," by Robert Hartmann, Prof. Univ.

species of smaller monkeys, as well as the great baboons, all ranking lower in the scale of approach to man, live largely on insects* and small lizards, which abound in the African and South American forests; the baboons preying on eggs and young birds. The large anthropoids, just referred to, also eat eggs and birds as well as small mammals, whenever they can get them, in addition to the fruits and nuts which form the great staple of their diet. Their mode of life, largely spent on the branches and higher parts of lofty trees, affords them great facilities for obtaining such food.

The large anthropoids.

Few people are aware that the large chimpanzee, so popular and well known as "Sally," in the Zoological Gardens, was not infrequently supplied with animal food, which she evidently consumed with great satisfaction. It has been observed also that the gorillas and chimpanzees in the Zoological Gardens at Berlin have a marked preference for animal food, of which they enjoy a small proportion. As above noticed, their organization indicates that while they are certainly "mixed feeders"—that is, obtain their food from both the animal and vegetable kingdoms—they have been accustomed to consume a larger proportion of vegetable matter than is now usually adopted by

The chimpanzees here and at Berlin.

Berlin. Translated as vol. liii. in "International Scientific Series." London: Kegan Paul and Co., 1885. Pp. 227–255.

* Hence the small monkeys at the Zoological Gardens have a daily supply of meal worms, to afford the necessary small but important animal contribution to their dietary.

man. And lastly, having regard to the evidence which inquiries into pre-historic records of man's life have revealed, as well as to our knowledge of his existence since, with what we have learned respecting the habits of savage tribes of recent date, it is impossible to doubt that his diet has long been derived from both animal and vegetable kingdoms. The chase was a favourite pursuit and supplied a certain quantity of animal food, always regarded as a welcome addition to the roots and fruits which must doubtless have largely contributed to sustain his daily life.

Man's early progenitors.

At the same time, I cannot doubt that more flesh is consumed by a large part of our existing population than is absolutely necessary or desirable. But this is mostly to be observed among those who possess ample means, and whose employments do not necessarily demand great muscular exertion, exposure in all weathers, or other causes of wear and tear to the animal tissues. Where exercise is very largely taken and manual labour is hard and prolonged, the concentrated and easily digested proteids of flesh are the most valuable food for man's purpose. Where there is but little physical labour or activity, a smaller proportion is mostly advisable; and a better state of bodily health may be generally assured by adopting an animal food—fish, poultry, and game, for example—less rich perhaps in proteids, and especially so in fat, than are beef or mutton, together with a considerable

The use of flesh liable to abuse.

proportion of the products of vegetable origin. The selection, however, has to be judiciously made.

True vegetarianism successful for some in certain conditions.

Theoretically, the vegetable eater, pure and simple, can doubtless find in his dietary all the principles adapted for the growth and support of the body as well as for the production of heat and energy, provided that he selects vegetable growths that contain all the essential elements named; but he should also possess that precious but somewhat rare endowment, an unimpaired and naturally strong digestion, capable of assimilating enough to support a fair average amount of activity. His life should be largely spent in the pure open air of the country, and he should select certain proportions of wheaten bread, oatmeal, and dried lentils, peas and beans, say with macaroni as a change, for the staple of his diet, chiefly to supply proteids, some carbo-hydrates and salts; moderate quantities of potato, rice, sago, fruits, and vegetables as supplementary carbo-hydrates and salts; and maize in the form of polenta, and olive oil with salads to furnish additional fats. In this way all the necessary elements are obtained and in due proportion, so that the total sum of food per diem is not too bulky, which a strict vegetarian diet is prone to become; otherwise he must swallow and digest a large weight of vegetable matter of less nutritive value, and therefore containing at least one element in large excess, in order to obtain all the elements he

Example of carbo-hydrates in excess.

needs. Thus the Irishman, if confined solely to a potato diet, would require for his support from twelve to fifteen pounds daily, which contain chiefly starch —a superfluous quantity, and an overload for any stomach—in order to obtain a barely sufficient quantity of nitrogen of which this tuber contains so little, with scarcely any fat. Hence he eats less of the potatoes, and obtains when he can milk, lard, bacon, or a herring to supply the deficiency. The Highlander, living mainly on oatmeal, requires a very much smaller weight, since this grain contains not only starch, but a moderate amount of nitrogen and fat, although not sufficient for his purpose; hence it is usually supplied by adding milk, and fish or bacon also when he can obtain them.

After all, there is great variety in the wants and tastes of individuals.

No doubt there is, as all observation in every department of natural history testifies, a great variety of results in comparing the individuals of any species, their wants, qualities, and endowments, etc. And no differences are greater in regard to such particulars than those which are manifested by man himself, the famous dictum notwithstanding, which declares his "equality" with his fellows, whatever that may be taken to signify. And thus it may be admitted that some persons are stronger and more healthy who live very largely on vegetables, while there are many others for whom a proportion of animal food appears not merely to be desirable but absolutely necessary. On the other hand, the

man who lives on a well-chosen mixed diet containing about the due proportion of proteids, fats, carbo-hydrates, and mineral constituents to support the daily requirements of an average activity, without stint on the one hand, or over supply on the other, will require a total of only two or three pounds of solid food as a perfect equivalent.* In studying this matter, individual habit must be taken into account. Again, an animal feeder may by slow degrees accustom himself to a diet chiefly vegetable, without loss of weight or strength, not without feeling some inconvenience in the process; but a sudden change in diet in this direction is for a time almost equivalent to starvation. The digestive organs require a considerable period to accommodate themselves to the performance of work different from that to which they have been long accustomed; while many persons, although able to diminish considerably the proportion of animal food, cannot relinquish it altogether without manifest injury to health.

The perfect diet is an adequate supply of each element in due proportion.

Moreover, in matters of diet essentially, many persons have individual peculiarities; and while certain fixed principles exist, such as those already laid down as absolutely cardinal, in the detail of their application to each man's wants, an infinity of stomach-eccentricities will be encountered if the sphere of observation is considerable. The old proverb expresses the fact strongly but truly: "What

* See tables on pp. 59, 60.

is one man's meat is another man's poison." Yet nothing is more common—and one rarely leaves a social dinner table without observing it—than to hear some good-natured person recommending to his neighbour, with a confidence rarely found except in alliance with profound ignorance of the matter in hand, some special form of food, or drink, or system of diet, solely because the adviser happens to have found it useful to himself. More rationally might the adviser recommend the universal use of a hat moulded to the form of his own head, or of a boot made on the last contrived for his own tender foot! For the differences between the parts just named in different individuals are far less, and are also much more easily estimated than the differences to be met with in their digestive organs, and in the capabilities with which these organs are endowed.

No universal rule applicable to all.

Great individual variety in relation to digestive power and wants.

Finally, I think we should carefully consider the question whether it is prudent or desirable to accept vegetarian limitations to man's resources in relation to food in face of the world's rapidly increasing populations. Flesh, as heretofore shown, is a most useful concentrated form of nutritious elements, easily portable in small compass, already cooked, and easily digestible under many conditions, in which vegetable foods cannot be readily obtained, or are too bulky for transport, or more difficult to cook than the former.

Why limit man's resources?

Would any commander be justified in accepting the responsibility of chartering a large vessel freighted with passengers and crew for a three months' voyage, with a commissariat solely supplied with vegetarian produce? Even with the additions of those animal foods, milk, butter, cheese, and eggs, which are so much used and so unwarrantably included under the denomination of vegetarian diet, it would be a rash proceeding. Still more the attempt to sustain an army in the field with similar rations.

Circumstances in which animal food is absolutely necessary.

And why should man be required to reject altogether the entire animal life of the sea, where Nature affords bounteous supplies of wholesome food on every habitable shore? The limitation of our food resources is in no sense desirable, but on the contrary is at this stage of the world's progress a flagrant anachronism. Man's enormously increased travelling facilities tend to render him naturally more cosmopolitan, more versatile in his tastes, appetites, and capabilities, and he can only gain advantage from a widened experience of new foods from both kingdoms, which modern enterprise must in time develop. The very idea of restricting our resources and supplies is a step backwards—a distinct reversion to the rude and distant savagery of the past, a sign of decadence rather than of advance.

Why reject the constant produce of the sea?

Let us have all the world can be made to produce; it will yet yield new and useful, possibly even better

foods than those of the past, to the scientific inquirer, be he animal-breeder, agriculturist, or gardener, and furnish additional proof that wisdom lies in accepting every form of wholesome food from whatever source, and without limiting the bounty of Nature in any.

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CHAPTER II.

Materials at man's command for food from the vegetable kingdom—Seeds cultivated becoming grain, or cereal foods, as wheat and its derivatives, flour, wheaten bread—Oats and oatmeal—Maize and Indian corn meal, polenta—Rice—Legumes: haricots and lentils, etc.—Potato—Roots, the carrot, etc., arrowroot—Fatty matters from seeds, nuts, etc.—Green vegetables—Gourds—Fungi—Fruits and bananas—Analyses of their composition, showing comparative amounts of proteids, carbo-hydrates, fats, salts, and water—Sugar—Tea, coffee, and cacao—Common salt—Importance of perfect mastication of food by the teeth in relation to digestion explained and insisted upon.

The resources of man in relation to food.

It will be interesting now to take a general but brief survey of the vast range of materials which civilized man has at his command for the purpose of food: the foregoing remarks on the chemical constituents of food and their relation to the needs of the human body having been intended to aid us in further appreciating the value of different kinds.

The cereals.

Commencing with the vegetable kingdom, the earliest tribes of man, during long ages, as already seen, obtained much of their sustenance from seeds, herbs, roots, and fruits, in addition to their gains by hunting and fishing. As

the art of cultivating the first-named was acquired, the cereals appeared as improvements on the seed-bearing grasses, and now conspicuously take the first place, as containing nearly all the elements necessary to life, and being therefore the most largely consumed. Wheat and its congeners, which rank highest in quality, had been distinguished, in the form of bread, as "the staff of life," long before the physiological demonstration of the fact had been attained. Wheat, oats, rye and barley, maize and rice, are the chief members of this group, wheat containing most of the nitrogenous or flesh-forming material, besides abundance of starch, a very small amount of fat, together with sufficient saline and mineral elements.

1. COMPOSITION OF WHEAT.

Proteids	12·42
Carbo-hydrates	70·53
Fats	1·70
Salts	1·79
Water	13·56
	100·00

2. FLOUR.

Proteids	10·8
Carbo-hydrates	70·5
Fats	2·0
Salts	1·7
Water	15·0
	100·0

3. COMPOSITION OF WHEATEN BREAD.

Proteids	8·1
Carbo-hydrates	51·0
Fatty matter	1·6
Mineral matter	2·3
Water	37·0
	100·0

4. OATMEAL.

Proteids	12·6
Carbo-hydrates	63·8
Fats	5·6
Salts	3·0
Water	15·0
	100·0

5. INDIAN CORN MEAL.

Proteids	11·1
Carbo-hydrates	65·1
Fats	8·1
Salts	1·7
Water	14·0
	100·0

6. RICE.

Proteids	6·3
Carbo-hydrates	79·5
Fats	0·7
Salts	0·5
Water	13·0
	100·0

7. LEGUMES—HARICOTS AND LENTILS (ALMOST ALIKE).

Proteids	25·5
Carbo-hydrates	58·6
Fats	2·8
Salts	3·2
Water	9·9
	100·0

8. TUBERS—POTATO.

Proteids	2·1
Carbo-hydrates	22·0
Fats	0·2
Salts	0·7
Water	75·0
	100·0

9. ROOTS—CARROTS AND PARSNIPS (ALMOST ALIKE).

Proteids	1·3
Carbo-hydrates	14·5
Fats	0·2
Salts	1·0
Water	83·0
	100·0

Turnips are almost the same, but water no less than 90·0.*

that which the cereals furnish.

Rice, on the other hand, contains but a moderate share of proteids, almost no fats and mineral constituents, but starch in great abundance; while maize, with a good supply of proteids and starchy matter, contains the most fatty material of the whole group. As derived

* I am indebted for the above analyses, etc., to Dr. Pavy's encyclopædic work, entitled "A Treatise on Food and Dietetics." Churchill.

from wheat must be named those valuable aliments, macaroni, vermicelli, and all the Italian pastes. Derived from barley is malt-saccharine, parent of the large family of fermented liquors known as beer. And from various other grains are obtained by fermentation and distillation, several forms of ardent spirit. Vinegar, best when produced from the grape, is also largely made from grain. Millet, dhoora, and buckwheat are all lower but useful members of the cereal group, and feed large populations in Eastern Africa and India.

The leguminous plants.

The legumes, such as beans, lentils, and peas, form a valuable aliment, containing more proteids ("legumin") even than the cereals, but with fat in small proportion, while starchy matter and the mineral elements abound in both groups.

Tubers and roots.

The tuber finds its type in the potato, which contains far less of proteids than rice, much starch, and almost no fat, few mineral salts, no less than three-fourths of the weight being water; the same may be said of the yam also. The roots may be illustrated by the beet, carrot, parsnip, and turnip, all containing little nitrogen, no fat, but much sugar, and water in very large proportion. Derived from roots and stems of foreign growth, we have arrowroot, tapioca, and sago, all pure starches and destitute of nitrogen.

Oils and fat.

Fatty matter is abundantly found in the olive, which supplies a large part of the world

with an important article of food. The almond and other seeds, as rape, cotton, mustard, are also fruitful sources of oil.

Under the term "green vegetables," a few leading plants may be enumerated as types of the vast natural supplies which everywhere exist:—The entire cabbage tribe in great variety; lettuces, endive, and cresses; spinach, sea-kale, asparagus, celery, onions, artichokes, and tomato all valuable not so much for nutritive property, which is not considerable, as for admixture with other food, chiefly on account of salts which they contain, and for their appetizing aroma and varied flavours. Thus condiments are useful, as the sweet and aromatic spices, the peppers, mustard, and the various potherbs, so essential to an agreeable cuisine. Seaweeds, under the name of laver, and the whole tribe of mushrooms, should be named, as ranking much higher in nutritive value than green vegetables; while truffles contain a still larger amount of the nitrogenous element. Pumpkins, gourds or marrows, and cucumbers are useful adjuncts to the dietary, especially in warm countries; while chestnuts and other nuts contribute to the support of life in Spain and the eastern shores of the Mediterranean, and acorns also are still serviceable in some parts. The bread fruit is of high value; so also are the cocoanut and the banana in tropical climates, all containing valuable proteids and carbo-hydrates.

The green vegetables.

Condiments.

Seaweeds, fungi, gourds, nuts, bread fruit.

Fruits and their derivatives.

Lastly must be named all those delicious but not very nutritive products of most varied kind and source, grouped under the name of fruits. These are characterized chiefly by the presence of sugar, acid, vegetable jelly, the principle of which is known as "pectine," and valuable saline matters, often combined with scent and flavour of exquisite quality. Most contain, *e.g.* apples and pears, grapes, cherries, strawberries, gooseberries, plums and peaches, about 80 to 86 per cent. of water with free acid, and varying proportions of sugar. Derived from grapes as its chief source, stands wine in its innumerable varieties, so closely associated by all civilized nations with the use of aliments, although not universally admitted to rank in technical language as a food. Next may be named sugar itself in its various forms, a non-nitrogenous product of great dietetic value, and, in a less degree, honey. No less important, from a different point of view, are the tea plant, the coffee berry, and the seeds of the cacao tree, source of cocoa and chocolate, owing to the presence in each of the two former of an element known as "caffeine," a mild and agreeable stimulant promoting mental activity. An analogous element, theobromine, distinguishes the cacaonut.

Tea, coffee, cacao.

Common salt.

There is a single element belonging to the mineral kingdom which is taken in its natural state as an addition to food, namely, common salt; and it is so universally recognized as

necessary, that it cannot be omitted here. The foregoing list possesses no claim to be exhaustive, only to be fairly typical and suggestive; a few omissions, which some may think important, doubtless exist. In like manner, a rapid survey may be taken of the animal kingdom.

Before quitting this, however, I shall add a few observations on the process of eating, which is in itself too important to be left without some consideration. For it has a special relation to the great classes of cereal foods and tubers, not popularly known as it deserves to be. The act of mastication by means of the teeth and tongue, exerts an influence of two kinds on the food during its transit through the mouth. Primarily, of course, there is the mechanical process of finely dividing all solid matters before they are swallowed. And that is the sole effect produced on flesh of all kinds, and is essential to good digestion, so that it can be acted upon easily when it arrives in the stomach, where it is exposed to the chemical action of the gastric juice and prolonged moist heat about 98°. But with another class of foods, the carbo-hydrates, chiefly starch, largely derived from grain of all kinds, and, therefore, all forms of bread, biscuit, and farinaceous pudding, the act of mastication performs much more than merely mechanical division. For by means of the saliva poured out during that process, and the peculiar

Process of eating.

Mastication.

First object.

Second object;

principle, "ptyalin," which it contains, a specific digestive action takes place on the starch, which, being naturally insoluble in water, is thus converted into a soluble material called "glucose," and so prepared for absorption into the system. In fact, by a proper amount of mastication, all starches should have undergone this change, or nearly so, before they arrive in the stomach, which does not deal with them. Any resulting deficiency which may have occurred through hasty or inefficient mastication in the mouth, cannot be remedied until after they have left the stomach and entered the first intestine, where they meet with the juices of the pancreas, which complete the process.

most important.

Stomach does not digest vegetable food nor any of the starches.

These facts should never be forgotten, and to this end ought to be taught, among other elementary rules of health, in very early life, since thorough mastication of all food is essential to our well being. The child should be made to practice this, not only when eating meat, but for soft foods, such as potatoes, bread, and even farinaceous puddings, in order to ensure the easy performance of digestion, the failure of which, in later life, is so often due to the early habit of swallowing rapidly and thoughtlessly large masses of unchewed food.

Mastication the necessary preliminary to digestion.

CHAPTER III.

Foods from the animal kingdom—Domestic animals and their derivatives, milk, butter, and cheese—Deer and its varieties—Ground-game—Large foreign game—Birds, domestic and other—Fish in great variety—"Shell-fish"—Reptiles—Man omnivorous; nature of food largely determined by circumstances—Prone to consume too much animal food, or to be careless in regard to selection of diet—Table showing the proportion of food-principles necessary to the daily dietary of an average adult, taking a moderate amount of exercise, in a temperate climate.

I SHALL here offer a brief sketch of man's chief resources in the matter of food derived from the animal kingdom.

First, the flesh of domestic quadrupeds: the ox and sheep, both adult and young; the pig; the goat; the horse and ass, chiefly in France. Milk, butter, and cheese in great variety are derived chiefly from this group. More or less wild are the red deer, the fallow deer, and the roe-deer. As ground-game, the hare and rabbit; while abroad, the bison, wild boar, bear, chamois, reindeer, and kangaroo are esteemed for food among civilized nations; but many other animals are eaten by

Animal kingdom flesh; milk and its derivatives.

Game.

half-civilized and savage peoples, among which are the buffalo, elephant, beaver, whale, seal, tortoise, and crocodile; also locusts and many other insects may be named. All these are rich in proteids, fatty matters, and saline materials.

Among birds, we have domestic poultry in great variety of size and quality, with eggs in abundance furnished chiefly by this class; all the wild fowl and aquatic birds; the pigeon tribe, the quail, and the smaller birds; winged game in all its well-known variety.

Poultry.

Eggs.

Of fish it is unnecessary to enumerate the enormous supply and the various species which exist everywhere, and especially on our own shores, from the sturgeon to whitebait, besides those in fresh-water rivers and lakes. All of them furnish nitrogenous matter largely, but, and particularly the white fish, possess fat in very small quantity, with a fair proportion of saline materials. The salmon, mackerel, eels, and herring tribes, including the pilchards, sprats, sardines, and anchovies, have more fat, the last-named in considerable quantity, forming a useful food well calculated to supplement cereal aliments, and largely adopted for the purpose both in the south and north of Europe. The cod-fishery furnishes an important source of food; like some other fish, the cod contains large quantities of oil in its liver only, its flesh, when in season, containing a very small proportion.

Fish.

The so-called reptiles furnish turtle, tortoise, and

edible frog. Among articulated animals are the lobsters, crabs, and shrimps, which furnish a large amount of proteids, but are not generally very easily digested. Among molluscs, the oyster and all the "shell-fish," so-called, which, as well as the above-named, closely resemble, in chemical composition, that of fish properly so-called.

Reptiles and articulata.

Molluscs or "shell-fish."

Amidst this profusion of supply from the varied products of the animal and vegetable kingdoms, man's selection must have been made, in different climes, almost entirely by individual experiment with the materials nearest to his hand. Having no certain knowledge of the structure and functions of his body, or of the relation of food thereto acquired other than empirically, the process must have been often marked by failure, sometimes with injury to the experimenter. And progress has doubtless been extremely slow.

Man's early experience in selecting material for food;

progress slow.

At the present time, man appears for the most part to consume more in quantity than is necessary for the healthy performance of the animal functions. Moreover, he has little knowledge of, or interest in, the processes by which food is prepared for the table, or the conditions necessary to the healthy digestion of it by himself. Until a tolerably high standard of civilization is reached, he cares more for quantity than quality,

Most persons eat too much.

Few men have any knowledge of food,

desires little variety, and, if immersed in engrossing pursuits as so many must be, is disposed to regard any innovation in the shape of a new aliment as impertinent, preferring the same food at the same hour daily, his enjoyment of which apparently depends greatly on his ability to swallow the portion with extreme rapidity, that he may apply himself to other and more important occupation without delay. Eating is treated in fact by multitudes much as they are disposed to treat religious duty—for eating is indeed one of the most important of all duties if my opening remarks are true—namely, as an observance which is generally irksome, but unfortunately necessary to be performed. Men even boast of their ignorance of so trivial a subject, regard it as unworthy the exercise of their powers, and—small compliment to their wives and sisters—fit only for the occupation of women.

or interest in its preparation.

We shall find it an interesting inquiry to ascertain what materials, under the empirical conditions named, have furnished the staple food of the common people of various climates and races—what, in short, supports the life and labour of the chief part of the world's population.

Food depends on climate.

In the tropics and adjacent portions of the temperate zones, high temperature being incompatible with the physical activity familiar to northern races, a very little nitrogenous material suffices, since the expenditure is small. Mostly only a moderate quantity of fat is taken, the

Food in the tropics.

demand for heat and for force being inconsiderable. The starchy products supply nearly all the nutriment required, and such, with a moderate amount of proteids but almost no fats (see pp. 44–5), are found in rice, millet, etc. Rice by itself is the principal food of this wide zone, including a large part of China, part of Africa, America, also the East and West Indies; and as temperature decreases by distance from the equator, some fish, fowl, or other animal food in the form of soups or broth, are added. All adopt to some extent "a mixed diet." Yet in the islands of tropical Polynesia are many fine native races who consume freely some animal food.

The East.

In the north of Africa, Arabia, and some neighbouring parts, the date, which contains sugar in abundance, is largely eaten, as well as maize and other cereals. The variety of millet known as "Doura" is largely cultivated in Egypt, as are lentils, and flesh is generally used in small proportion.

In Southern Europe. Italy.

Crossing to Europe, the southern Italian is found subsisting on macaroni, legumes, rice, fruits, and salads, with oil, cheese, fish, and small birds, but very little meat. More northward, besides fish and a little meat, maize is the chief aliment, mostly in the favourite form of "polenta," the meal well boiled in water producing a substantial porridge; rye and other cereals take a second place. The chestnut also is largely eaten by the poorer population, both it and maize containing more fatty matter than wheat, oats, and legumes.

In Spain, the inhabitants subsist chiefly on maize and rice, with some wheat and legumes. Among the latter the garbanzo, or "chick-pea" (*cicer arietinum*), is one of the principal vegetable components of the national *olla*, which contains also a considerable proportion of animal food in variety, as bacon, sausage, fowl, etc. The chick-pea is cultivated in the East, and being roasted is known as "parched pulse," as portable food for travellers there. Fruit is fine and abundant; especially so are grapes, figs, and melons. There is little or no butter, the universal substitute for which is olive oil, produced in great quantity. Fowls, meat broths, and the pig furnish the chief animal food, and garlic is the favourite condiment.

Spain.

Going northward, flesh of all kinds occupies a more considerable place in the dietary. In France the garden vegetables and legumes form an important staple of diet for all classes; the very numerous small land proprietors subsist largely on the direct products of the soil, with some milk, poultry, and eggs, the produce of their small farms. Beef is employed for their national *pot-au-feu*, an admirable mixed dish, in which a small portion of meat is made to yield all its nutritive qualities, and to go far in mingling its odour and savour with those of the fragrant vegetables, including sweet and savoury herbs, which are largely added to the stock. The beef, which is an essential portion of the dish, is

Different food necessary in Northern Europe. France.

often eaten hot after the soup, but sometimes cold, with plenty of green salad and oil, doubtless the most palatable mode of serving, while it furnishes a source of fat, if not otherwise provided for by butter, cheese, etc.*

Throughout the German Empire, the cereals, legumes, greens, roots, and fruits supply an important proportion of the food consumed by the common population. Wheaten bread chiefly, but also black bread made from rye, is largely used throughout the north of Europe; it is somewhat inferior in nutritious quality to the former, although by not so much as some have supposed; also beans and peas are used abundantly. Potatoes and green vegetables of all kinds are served in numerous ways, but largely in meat-soup, a favourite dish. Sauer-kraut is a preparation of the cabbage-leaf after fermentation in salt brine, by which it is preserved for use at all seasons of the year, and is largely used and esteemed as a wholesome and palatable addition to other food. Meats, chiefly pork, are greatly esteemed in the form of sausage, and appear also in small portions or joints, but freely garnished with vegetables, on the tables of those who can afford animal diet. Moreover, sweet farinaceous dishes, containing more or less butter or lard, abound. Going further north, where the climate is no longer adapted for the production of wheat, as in Norway and Sweden, the common people rarely

Germany.

* For full details as to the nature and preparation of the *pot-au-feu*, see the Appendix.

see bread, living on oat and rye meal porridge, potatoes, adding much bacon and herrings for necessary fat and more proteids. Hard rye cakes hanging in the cottage rafters half the year are esteemed, as are sour milk in summer, and coffee or weak beer at all times. In northern Russia the same cereals, salted fish, and bacon form the staple foods, while much coarse-grain spirit is consumed.

Norway and Sweden.

Russia.

Lastly, it is well known that the inhabitants of the Arctic zone are compelled to consume large quantities of oily matter, in order to generate heat abundantly; and also that animal food is necessarily the staple of their dietary. Vegetables, which moreover are not producible in so severe a climate, would there be wholly inadequate to support life. As a matter of fact, the considerable populations here which may be classed as Esquimaux, Greenlanders, and others, owe their existence and extremely active life to their ability to thrive on animal food alone; while inhabitants of Iceland, northern Siberia, and some tribes of North American Indians, live almost solely on the flesh of animals.

The Arctic Circle.

Before closing this chapter, the present appears to be a fitting place in which to give a brief *résumé* of particulars relating to the practical application, suitable to our own portion of the temperate zone, of those principles which scientific research has established concerning nutrition.

As affording a typical example of the relative

quantities of the four classes named as essential for human food, I offer the following table, from Dr. Pavy's work named below :—*

"A diet containing the requisite combination of alimentary principles for just maintaining health, in a person of average height and weight, under exposure to a temperate climate and a moderate amount of muscular work. It must be of course understood that very considerable deviation from the proportions here named may be regarded as suitable for different constitutions; in some cases, less of the proteids and more of the fats, in others, more or less of the carbo-hydrates, etc.

Average requirement for adult male of each class of food-principles.

Dry food.	In ozs. avoir.	In grains.	In grammes.
Proteids	4·587	2006	130
Fatty matter . . .	2·964	1296	84
Carbo-hydrates . .	14·250	6234	404
Salts	1·058	462	30
Total . . .	22·859	9998	648

"Thus about 23 ozs. form the quantity of dry solid matter contained in this standard diet, and a fifth of

* "A Treatise on Food and Dietetics," by F. W. Pavy, M.D., Consulting Physician to Guy's Hospital, etc. London: Churchill. Second Edition, p. 452.

See also the latest views on this subject in "A Text-Book of Physiology," by M. Foster, M.A., M.D., F.R.S., etc., Professor of Physiology in the University of Cambridge. Part II. Macmillan. 1895.

it is composed of nitrogenous matter. If we reckon that our ordinary food contains, say, 50 per cent. of water, these 23 ozs. will correspond to 46 ozs. of solid food in the condition in which it is consumed. To complete the alimentary ingesta, a further quantity of from 50 ozs. to 80 ozs. of water may be put down as taken, under some form or other, daily." *

Such a scheme may be practically represented as realized in the following allowance of food for a day's consumption by an individual, as above described, of the male sex, recalling, of course, the remarks just quoted in respect of "considerable deviation" necessary "for different constitutions" and tastes:—

DAILY DIETARY.

1. Bread	7 to 10 ozs.
2. Butter, bacon, including the former used in cookery	3 ,,
3. Fish, cooked	4 to 5 ,,
4. Meat, cooked, including poultry, game, and for soup	7 or 8 ,,
5. Eggs, 2 or 3, including those used in cookery.	
6. Rice, macaroni, oatmeal, or other farinaceæ, and flour in cookery	4 to 5 ,,
7. Potatoes, cooked	4 to 6 ,,
8. Sugar, including cookery	1 ,,
9. Green vegetables and fruits	4 to 6 ,,
10. Milk, including that used in cookery, ¾ pint.	
11. Mineral salts, mostly included in foregoing food. Except salt used in cookery and at table.	
12. Water in tea, coffee, and other forms of drink, about 3 or 4 pints.	

* "A Treatise on Food and Dietetics," by F. W. Pavy, M.D., p. 452.

CHAPTER IV.

Food of the English peasant—Food of the middle class generally too solid or stimulating—Tending to corpulence as age advances—The cause of chronic complaints in later years—The produce of land in grain with pigs and poultry larger than when devoted solely to grazing—Value of fish as an article of diet—Supply ought to be more abundant and cheaper—Regimen suited to the sedentary and those who are chiefly brain-workers—Elementary principles in selecting, combining, and cooking different forms of food—That of the agricultural labourer and other hard workers—The legumes: haricots, lentils—Various modes of cooking them—Also hints for their use at middle-class tables—Bread made of whole wheat-meal and its use—Receipts for making it—Combination of elements to produce a complete food—Cheese as diet for the working man: its use by the Swiss guides—Rice, and the necessary additions to make with it palatable, nutritious dishes—The potato, and similar combinations.

Foods consumed by the labouring classes

WE will now consider the food which the English peasant and artisan provide. The former lives, for the most part, on wheaten bread and cheese, with occasionally a little bacon, some potatoes, and perhaps garden greens; it is only occasionally indeed that he can obtain fresh meat. To this dietary the artisan adds meat as a

rule, mostly beef or mutton, and some butter. A piece of fresh, and therefore not tender beef, is baked, or cooked in a frying-pan, in the latter case becoming a hard and not very digestible morsel; by the former process a somewhat better dish is produced, the meat being usually surrounded by potatoes or by a layer of batter, since both contain starchy products, and absorb the fat which leaves the meat. The food of the peasant might, however, be cheaper and better; while the provision of the artisan is often extravagant and badly cooked. At this period of our national history, when food is scarce, and the supply of meat insufficient to meet the demand which our national habits of feeding perpetuate, it is an object of the first importance to consider whether other aliments can be obtained at a cheaper rate, and at the same time equal in quality to those of the existing dietary. Many believe that this object may be accomplished without difficulty, and that the chief obstacle to improvement in the food-supply, not only of the classes referred to, but in that of the English table generally, is the common prejudice which exists against any aliment not yet widely known or tried. The one idea which the working classes possess in relation to improvement in diet, and which they invariably realize when wages are high, is an abundant supply of butcher's meat. To make this the chief element of at least three meals

often ill selected and wastefully prepared.

Susceptible of much improvement.

daily, and to despise bread and vegetables, is for them no less a sign of taste, than a declaration of belief in the perfection of such food for the purposes of nutrition. This belief doubtless arises from observing the habits of those who are better provided than themselves with pecuniary resources.

Englishmen consume too much animal food.

For I have already intimated that Englishmen of the middle classes generally have adopted a diet adapted for a somewhat more northerly latitude than that which they occupy; that their food is mostly richer in fats and proteids than it need be, and that their numerous forms of indigestion and much resulting chronic disease are further necessary consequences of the same error. They indulge, not necessarily in quantity, but in a kind of food generally reputed "simple and wholesome," which nevertheless for them creates a condition of corpulence, not merely inconvenient, but prejudicial to health, and to their prospects of longevity. Such tendencies existing, and especially if the individual does not, or cannot take much exercise, the choice of food, free from fatty constituent, or from fat-producing elements, is a matter of no small importance. Then, again, it is absolutely certain, contrary to the popular belief as this is, that while a good supply of food is essential during the period of growth and active middle life, a diminished supply is desirable in relation to health and prolongation of life during declining years, when physical

Quantity of food to be diminished in advancing years.

exertion is small, and the digestive faculty sometimes becomes less powerful also. I shall not regard it as within my province here to dilate largely on this topic, but I desire to point out that the system of "supporting" aged persons, as it is termed, with increased quantities of food and stimulant, is an error of cardinal importance, and, without doubt, tends to shorten, or to embitter life. This erroneous practice ignores the important fact that as age increases, the ability to eliminate food unnecessarily consumed notably diminishes. The functions by which surplus and effete matters are thrown off from the system are less active than in youth and middle age; and the results of over-feeding, which a robust constitution can get rid of without obvious evil, become a source of dangerous embarrassment to the feebler organization of one advanced in years. Hence numerous chronic disorders, often regarded as peculiar to the latter third of life, are to a great extent avoidable. So far from continuing to select the strong nourishment which may have been necessary during the toil and anxieties of thirty years or more of adult energy and activity throughout the prime of life, the elderly man who desires to preserve fair health, and to attain to longevity, should gradually diminish his use of strong nitrogenous and especially of much fatty food. He should substitute a lighter dietary, as he subsides naturally, and more or less gradually, into the class of the sedentary, and adopts the

Serious evils arise from neglect of this course.

regimen best adapted thereto, hereafter to be considered.*

These things being so, a question also inviting consideration arises in relation to the economical management of the national resources. For it is generally understood that every acre of good arable land devoted to the production of grain is capable of becoming the source of a much larger amount of produce of equivalent value as food, than if applied to the feeding of sheep and oxen. In other words, a given area of such land cropped with cereals and legumes, will support a more numerous population than that which can be sustained on pasture land, mostly of inferior quality, devoted solely to the growth of cattle. And for another reason, because the corn-land will also produce, without much extra cost, a considerable quantity of animal food, in the form of pigs and poultry, upon the offal or coarser parts of vegetable produce which are unsuitable for human consumption. Moreover, the animals are useful to a considerable extent to the land, by destroying injurious insect life, and by depositing valuable manure.

The national resources related to the subject of diet.

But owing to our increasing population, and to the uncertainty of the climate, this country has to purchase every year a large and increasing quantity of

* See "Diet in Relation to Age and Activity," where the subject is discussed at length. Kegan Paul, Trench and Co., Paternoster Row. By the Author.

corn and flour from foreign countries, while more of our own land is yearly devoted to grazing purposes. The increased import of corn and flour and other agricultural produce by Great Britain during the last twenty-six years (that is, previous to the end of 1895, which is the latest information at present obtainable), is exhibited in the following table: *—

Large meat production here causes large import of foreign grain.

CONSUMPTION OF IMPORTED FOODS PER HEAD ON POPULATION IN THE UNITED KINGDOM.

Articles.	1869.	1888.	1895.
Corn and flour .	155·85 pounds	220·14 pounds	285·09 pounds
Butter . .	4·52 ,,	8·16 ,,	7·92 ,,
Cheese . .	3·52 ,,	5·56 ,,	5·93 ,,
Bacon and hams .	2·68 ,,	10·25 ,,	14·63 ,,
Eggs . . .	14·38 number	30·0 number	38·97 number

At the same time our importation of meat has been enormously increasing during the last ten years. Thus the value of dead meat and of animals has now reached the annual amounts here quoted: †—

	1887.	1889.	1896.
	£	£	£
Dead meat . .	14,662,100	18,601,309	24,753,002
Animals . . .	6,346,727	10,360,807	10,438,699
Butter and margarine .	—	—	17,842,508
Cheese . . .	—	—	4,900,428
Eggs	—	—	4,184,567

* *Statesman's Year Book*, 1897, p. 86. And what might be the extra cost of obtaining this supply in time of war?—a contingency we ought seriously to reckon on. We should then, perhaps, draw much more largely than we do at present on the enormous resources which exist on all our shores, referred to in the succeeding paragraph.

† *Statesman's Year Book*, 1897, pp. 84-86.

Lastly, those who are interested in the national supply of food must lament that, while Great Britain possesses perhaps the best opportunities in the world for securing a large and cheap supply of fish, she fails to attain it, and procures so little only, that it is to the great majority of the inhabitants an expensive luxury. Fish is a food of great value; nevertheless it ought in this country to be one of the cheapest aliments, since production and growth cost absolutely nothing, only the expenses of catching, and of a short transport being incurred. This is a question which must sooner or later be solved by the public themselves, unless some persons in the trade, more enterprising than those who now pursue it, will abandon existing conventional rules and habits, and venture on the assuredly safe and profitable enterprise of supplying fish, good and fresh, at prices far lower than those which it is agreed shall rule at present.*

Our fish supply neglected.

* Something has been done to meet the wants of fish consumers by the fish dealers at the docks of Grimsby, Lincolnshire, to afford a regular, prompt, and cheap supply of fresh fish to families in London, and also in the country for those who reside at no great distance from a railway station. The result I believe to be tolerably satisfactory; but, with enterprise, it might be rendered more so. For a regular and varied kitchen supply—and I believe a weekly fish-dinner is a welcome as well as a wholesome change for the "servants' hall"—it may be depended on as fresh in quality and reasonable in price. But for "live salmon" or a choice turbot, as well as for "the pick of the market" in soles and other fish, a town fishmonger of the highest repute should be always applied to.

Fish valuable food for many,

A very large proportion of our town population would profit by exchanging some of their meat, as an article of daily diet, for fish. Where occupation is chiefly of an intellectual kind, and demands little physical exertion, fish is often much more suitable than butcher's meat. Without active exercise in the open air, the digestive system is apt to become overloaded and oppressed by meals consisting chiefly of meat; and even if the primary digestion of it is, in these circumstances, fairly accomplished, many a constitution suffers from an over-supply of nutritive matters, which cannot be disposed of easily without considerable habitual muscular activity.

There is no doubt that the obvious and admitted value of a highly nitrogenous food, of which meat is a concentrated form, to the labouring man, has occasioned the almost universal belief that such meat, of which let beef and mutton be the type, is the most desirable food staple for all. "If you wish to be strong, eat plenty of meat;" "If you are feeling weak, eat more meat, and at every meal;" such are the well-known articles of a creed which is deeply graven in the popular mind. Nevertheless, few statements relating to diet can be more misleading, and this is, as already intimated, one which often gives rise to serious ill-health.

It is this habit of adopting meat as the chief element of his dietary, which the sedentary man, with little opportunity for bodily exercise, the man who

uses his brain more than his muscles, should avoid. But especially, also, should he abstain from fatty matters in large quantity, taking only a moderate proportion, which is not only permissible, but to a small extent necessary. For if he habitually consumes these two classes of food freely, materials are introduced into the system which it cannot eliminate under the conditions named, and which must ultimately obstruct the function of some internal organ. Thus the periodical bilious attack, or the recurring fit of gout, or some other relentless tormentor, clears the system for a time of the offending matter which the daily error in diet is perpetually reproducing and accumulating. Those who are thus affected often endeavour to ward off their troubles by systematic muscular exercises, fencing, rowing, and the like, and they do so with a certain amount of success. It is for the purpose of getting rid of superfluous nutritive materials that others (who may be wholly unconscious of the need which impels them) secure their yearly shootings, make Alpine excursions, or seek the mineral springs of a foreign spa—more or less agreeable contrivances, all of them, for effecting the required elimination once or twice a year, but which would not be necessary had food suitable to a sedentary life only been taken. On the other hand, the pleasurable pursuits named would—the proviso as to diet having been obeyed—be more enjoyed for their own sake;

and preferable to flesh for the sedentary,

for whom much fatty food is undesirable.

Effect of muscular exercise, etc.

and the considerable amount of training essential for the over-loaded constitution would not be a troublesome preliminary. Many a man might indeed safely pursue a sedentary career, taking only a small amount of exercise, and yet maintain an excellent standard of health, if only he were careful that the "intake" in the form of diet corresponded with the expenditure which his occupations, mental and physical, demand. Let him by all means enjoy his annual pastime, and profit by it, to rest his mind and augment his natural forces, but not for the mere purpose of neutralizing the evil effects of habitual dietetic wrong-doing.

The "intake" and the "output" should correspond.

It is for this large and increasing class of the community, who are emphatically brain-workers, that a fair proportion of fish furnishes an appropriate food; and as the tendency of civilization is slowly but surely to develop mental activity, and to dispense with laborious handicraft, a good supply of cheap fish becomes every day more important to the community.

Fish diet and brain work.

For the sedentary man, whatever his calling in life, whose engagements permit him only to take just that moderate amount of muscular exercise which is in all circumstances essential to health; for a great proportion of women, whose engagements are incompatible with much activity in the open air,—the nutritive elements afforded by fish admirably supply an important part of the wants of the body. The moderate

amount of flesh-forming material present in fish, and in a form which entails little labour on the digestive organs—for most persons certainly less than meat—and the facility with which fish may be associated with other elements—some fatty matters, with cereals and vegetables, as well as fruits—place it in the first rank of foods in that mixed dietary which is suitable to those who lead more or less the kind of life referred to. I by no means say that it should supersede the use of meat altogether, although it may do so sometimes with advantage; a point only to be determined in each individual instance after some observation and experiment. For in all cases, it is to be remembered—and I repeat the statement on account of its importance—that a person who has habitually eaten meat two or three times daily cannot at once exchange it for fish and cereals or vegetables, without some discomfort, to say the least. All radical changes in diet, even in the right direction, require to be gradually made; the stomach conforms slowly, when long accustomed to deal with highly nitrogenized animal food, to the task of deriving from unaccustomed materials the support necessary to the body. Given time for such modification of function, and it is remarkable—at least, it appears so to those who have not practically studied the subject—that a diet which, if adopted suddenly might fail to be either digestible or nutritious, may become the most wholesome and appropriate which the individual can adopt.

Changes in the dietary to be made by degrees.

Fish diet and brain work, continued.

I may here advert to a belief which appears to be widely entertained, viz. that fish contains certain elements which adapt it in an especial manner to renovate the brain, and so to support mental labour. There is no foundation whatever for this view: the value of fish to the brain-worker is due simply to the facts already referred to, viz. that it contains, in smaller proportion than meat, those materials which, taken abundantly, demand more physical labour for their complete consumption, and which without this produce an unhealthy condition of body, more or less incompatible with the easy and active exercise of the functions of the brain.

The dietary of the working man.

Having enunciated some general principles, which it is important should first be established, I shall offer some illustrations of the manner in which they may be applied. This brings us to the second division of the subject, viz. the selection of food and the best modes of preparing it for general use; in other words, a sketch of the elementary principles of cooking with typical illustrations. Dealing first with that of the agricultural labourer, our object is to economize his small pittance; to give him, if possible, a rather more nutritive, wholesome, and agreeable dish—and it is assumed that he can have but one—than his means have hitherto furnished. But here there is little scope for change; already said to live chiefly on bread and cheese, with bacon occasionally, two indications only

for improvement can be followed, viz. augmentation of nitrogenous matter and of fatty matter, to support the body and to furnish heat and force. A fair proportion of meat, one of the best means of fulfilling them, is not within his reach. First, his daily bread ought to contain all the constituents of the wheat, instead of being made of flour from which most of the mineral elements have been removed ; a subject to be considered at some length hereafter (see pp. 78–80). But beans and peas are richer in nitrogen than wheat, although not so easily assimilated, and contain less fat, the last being in small quantity, while maize has three times their proportion of fat. Hence all of these would be useful additions to his dietary when they can be well digested, being cheaper than wheat in the market, although the retail demand being at present small, they may not be so in the small shops. It may be remembered how well the "Erbswurst," which derives its value, for men whose powers of digestion are sharpened by hard labour in the open air, from the legumes combined with animal fat, supported the work of the German armies during the winter of 1870-71. It consisted of a well-cooked *purée* of peas, mixed with a considerable proportion of bacon or lard, and dried so as to be portable, constituting in small compass a perfect food, especially suitable for supporting muscular activity and exposure to cold. It probably nearly equalled in value preserved meat,

Bread.

Leguminous foods.

The "Erbswurst" and its value.

prepared by salting or other processes for transport, being not only less bulky, but more convenient for use without delay at any time. By no means to be depended on as a staple, or to take the place of fresh meat, it was a most valuable supplement when the latter was not available. It was better also, because it was relished cold, or could be converted in a few minutes into good soup with boiling water. But for our labourer probably the best of the legumes is the haricot bean, red or white, the dried mature bean of the plant whose pods we eat in the early green state as "French beans."* For this purpose they may be treated thus: Soak, say, a quart of the dried haricots in cold water for about sixteen to twenty-four hours, after which place them in a saucepan, with two quarts of cold water and a little salt, on the fire; when boiling remove to the corner and simmer slowly until the beans are tender; the time required being about at least three hours.† This quantity will fill

Haricots.

* What we call "French beans" may be the product of several kindred varieties of the kidney bean, dwarf or climbing, varying according to locality and soil, and distributed over a very large part of Europe. When gathered early, before it is fully grown, the bean is green, like a green pea, and forms an admirable dish, known in France as *flageolets*. When the ordinary French beans (immature green pods) are mixed in about equal proportions with the *flageolets*, the dish, which is a very palatable one, is well known in France as *haricots verts panachés* (variegated), and might be served at our tables with advantage.

† If the water is hard, a little soda should be added to soften it.

a large dish, and may be eaten with salt and pepper. It will be greatly improved at small cost by the addition of a bit of butter, or of melted butter with parsley, or if an onion or two have been sliced and stewed with the haricots. A better dish still may be made by putting all or part, after boiling, into a shallow frying-pan, and lightly frying for a few minutes with a little lard and some sliced onions. With a few slices of bacon added, a comparatively luxurious and highly nutritive meal may be made. But there is still in the saucepan, after boiling the haricots, a residue of small value, which the French peasant's wife, who turns everything to account, utilizes in a manner quite incomprehensible to the Englishwoman. The water in which dried haricots have stewed, and also that in which green French beans have been boiled, contains a proportion of nutritive matter. The Frenchwoman preserves this liquor carefully, cuts and fries some onions, adds to it these and some thick slices of bread, a little salt and pepper, with a potherb or two from the corner of the garden, and thus serves hot an agreeable and useful *croûte au pot.* It ought to be added that the haricots so largely used by the working classes throughout Europe are not precisely either "red" or "white," but some cheaper local varieties, known as *haricots du pays.* These are now supplied here at about twopence a pound, and in large quantity might be obtained at a somewhat cheaper rate, their quality as food being not inferior to other kinds.

Various methods of cooking.

But haricots—let them be the fine white Soissons—

The finest haricots;

are good enough to be welcome at any table; and our artisans, whose means are much larger than those of the class above named, might improve their dietary by adopting some of the foregoing hints, as well as those which follow. A roast leg or shoulder of mutton may be garnished by a pint boiled as just directed, lying in the gravy of the dish; and some persons think that, with a good supply of the meat gravy, and a little salt and pepper, "the haricots are by no means the worst part of the mutton."

their place at well-furnished tables.

Then with a smooth *purée* of mild onions, which have been previously sliced, fried brown, and stewed, served freely as sauce, our leg of mutton and haricots become the *gigot à la bretonne* well known to all lovers of wholesome and savoury cookery. Next, white haricots stewed until soft, made into a rather thick *purée*, delicately flavoured by adding a small portion of white *purée* of onions (not browned by frying as in the preceding sauce), produce an agreeable garnish for the centre of a dish of small cutlets, or an *entrée* of fowl, etc. Again, the same haricot *purée* blended with a veal stock, well flavoured with fresh vegetables, furnishes an admirable and nutritious white soup. The red haricots, in like manner, with a beef stock make an excellent brown soup, technically known as *potage à la Condé*, and usually served with small fried croutons. The same may be said of lentils, known as "Chantilly," which

Haricot soups,

have much the same nutritive value, and often an agreeable change, especially in winter, when these as well as split peas are usually met with in the well-known form of a *purée*. If, instead of meat, we employ a good vegetable stock, agreeably flavoured with carrot, turnip, onion, and savoury herbs, a first-rate *soup maigre* is produced. When, in place of meat, a broth chiefly made from game—especially from the remains of a hare, the prime parts of which have been consumed at table—is thickened with red haricot *purée*, the result is an excellent soup, which in texture and in flavour would by many persons not be distinguishable from a common *purée* of game itself. A hint for those who do not despise economy in cuisine, when the value of the product is unquestionable. Stewed haricots also furnish, when cold, an admirable salad, improved by adding slices of tomato, etc., the oil supplying the one element in which the bean is deficient; and a fairly nutritious food is produced for those who can digest it in this form. The same dietetic principle, it may be observed, has, although empirically, produced the well-known dishes of beans and bacon, ham and green peas, boiled pork and pease-pudding, all of them old and popular but really scientific combinations. Thus also the French, serving *petits pois* as a separate dish, add butter freely and a dash of sugar, the former making the compound physiologically complete, the latter agreeably heightening the natural sweetness of the vegetable, especially

and other nutritious combinations.

when the peas are a little old, insipid, or have lost their accustomed flavour.

Remarks on meal bread.

I have just adverted to the bread of the working man, and recommended that it should be made from entire wheat meal; but it should not be too coarsely ground. Extreme coarseness in "whole wheat meal," as it is usually termed, is a condition designed to exert a specific effect on the digestion for those who need it, and, useful as it is in its place, is not desirable for the average population referred to. At the same time, no portion of the husk of the grain should be removed from the wheat when ground, whether coarsely or finely, into meal. That a partial removal is systematically advocated by some as an improvement, is one of the numerous illustrations of the modern and almost universal craze which just now exists among food purveyors of almost every description, for eliminating all inert or innutritious matter from the food we eat. This extraordinary care to employ nothing in our diet but matter which has nutritive value, that is, can be absorbed into the system, is founded upon want of elementary knowledge of the first principles of digestion; and yet, strange to say, the mistaken, indeed mischievous, practice is supported, probably for want of thought, by many who ought to know better.

Reason for not removing the husk.

It seems now to be almost overlooked that no proper action of the intestines can take place unless a very considerable quantity of inert matter is present

in our daily food, existing as material which cannot be digested. By this character we are not to suppose that it is in the least degree "indigestible" in the sense of that term when employed to signify "difficult digestion," but only that it passes unchanged through the body, neither receiving nor exciting any action. When there is a considerable proportion of this in the food, the bowels can act daily and regularly, having a mass which they can transmit. When, on the other hand, the food is so "nutritious" as to be almost entirely absorbed, there is very little solid matter to transmit, and the action of the bowels is therefore scanty, irregular, and insufficient. This is, in fact, a very extensively recognizable cause of a great deal of the habitual constipation so prevalent among the middle classes at the present time. To return to the subject of coarse wheat meal, let me observe that it does not readily produce light agreeable bread when made in the form of ordinary loaves: a solid mass of this meal being a bad conductor of heat, will have a hard flinty crust if baked sufficiently to cook the interior; or it will have a soft dough-like interior, if the baking is checked when the crust is properly done. Consequently the form of a flat cake, resembling that of the ordinary tea-cake, is preferable, about 1¼ inch, or at most 1½ inch thick, since it admits of the right amount of heat operating equally throughout the mass.

Value of inert matters in food.

Best form for baking.

The following receipts will be found successful,

probably after a trial or two, in producing excellent, light, friable, and most palatable bread in the form recommended.

Receipt for whole-meal cakes, using baking powder.

The first directs the mode of making it with baking powder.—Take two pounds of coarsely ground whole wheat meal, and add half a pound of fine flour, or, better still, the same weight, or more if preferred, of *fine* Scotch oatmeal. Mix thoroughly with a sufficient quantity of baking powder and a little salt; then rub in two ounces of butter and make into dough—using a wooden spoon—with cold skimmed milk or milk and water, soft in consistence, so that it can almost be poured into the tin ring, which gives it form when baked. In this manner it is to be quickly made into flat cakes (like tea-cakes), and baked on a tin, the rings used being about an inch high and seven or eight inches in diameter, each enclosing a cake. Put them without delay into a quick oven at the outset, so that the external surface may be instantly hardened or sealed to prevent the gas formed by the baking powder from escaping, otherwise the result will be a dense, thin, and heavy cake instead of a light and spongy one. This is a cardinal point in the process which is often overlooked. When the object is accomplished, which will occupy some five or seven minutes, the temperature should be lowered to complete the process gently and completely.*

* The following is a simple and excellent formula for "baking

If made with yeast, which is for general purposes preferable, when either good German or the fresh home product can be obtained, add the necessary quantity to the dough, made as above directed with the two meals, butter, salt, and *warm* milk and water; make the cakes and put them on the tin with their rings, and set near the fire to rise, which they will do in an hour or little under. Then bake in a medium oven in the same way as for any other fermented bread. When yeast is used and not baking powder, a medium coarse oatmeal may be added to the wheat meal instead of fine oatmeal, which is necessary in the foregoing receipt.

With yeast.

The butter and milk supply fatty matter in which the wheat is somewhat deficient; all the saline and mineral matters of the husk are retained; and thus a more nutritive form of bread cannot be made, combined with a desirable proportion of inert matter. Moreover, it retains the natural flavour of the wheat, in place of the insipidity which is characteristic of fine flour, although it is indisputable that bread produced from the latter, especially at Paris and Vienna, is unrivalled for delicacy, texture, and colour.

powder;" one which has been long used for this and other purposes. It may be obtained at any chemist's and in any quantity, based on the following proportions :—

Tartaric acid, 2 ozs.
Bicarbonate of soda, 3 ozs.
Common arrowroot, 3 ozs.

Mix well; place in a wide-mouthed corked bottle, and keep perfectly dry.

Whole wheat meal may now be bought in most towns, but by no means always in such perfect condition as it ought to be. When it cannot be obtained, a useful corn mill, the cutting part to be made of steel, is now constructed cheaply for home use; the best white wheat should be procured, and the grain can be ground so as to supply a meal of any degree of coarseness desired.*

Domestic mills for grinding wheat.

An important object in furnishing the foregoing details is to illustrate how combinations of the nitrogenous, starchy, fatty, and mineral elements may be made, in well-proportioned mixtures, in order to produce what I have termed a "complete" dish—that is, one which supplies every demand of the body, without containing any one element in undue proportion. For it is obvious that one or two of these elements may exist in injurious excess, especially for delicate stomachs, the varied peculiarities of which, as before insisted on, must sometimes render necessary a modification of all rules. Thus it is easy to make the fatty constituent too large, and thereby derange digestion, a result frequently experienced by persons of sedentary habits, to whom a little pastry, a morsel of *foie gras*, or a rich cream is a source of great discomfort, or of a "bilious

The combination of elements necessary for a "complete" food.

Result of undue proportion of one element.

* Kent & Co., the well-known makers of domestic appliances, in High Holborn, supply such mills.

attack;" while the outdoor labourer, who requires much fatty material for his work, would have no difficulty in consuming a large quantity of such compounds with advantage.

Cheese as a supplement to bread is largely used by the labouring man, especially in agricultural districts. It is a food well adapted to his wants; while his digestion, unlike that of many a factory operative who works under cover, generally deals with it easily. Cheese is one of the most concentrated forms of nitrogenous food, and admirably supports hard labour in the open air. Thus it is that Swiss guides and mountaineers always demand a good supply of cheese and butter among the provisions when a long day's work is planned. When taken at the end of a full meal as a savoury morsel, the flavour only is required, and the quantity should be small. Many persons whose daily life affords little opportunity for muscular activity find cheese, at all events when uncooked, not easily digestible. And when such do employ it as an article of food, it should be regarded as taking the place of meat, which is not so rich in nitrogen. Mr. Mattieu Williams has some good remarks on this subject,* from which it appears that when properly cooked, cheese is probably more easily assimilated by an ordinary stomach, than when eaten

Cheese valuable diet for labourer.

Use of it by Swiss mountaineers.

Improved by cooking.

* "The Chemistry of Food," by Mattieu Williams, pp. 135-40. London: Chatto & Windus. 1885.

in the raw condition. The well-known "cheese *fondu*" is an example. Here is the Swiss peasant's form as he gives it, and of the dish thus produced he speaks highly, from observation as well as from personal experience, in relation to its sustaining power, and its right to form the staple dish of a substantial meal, appropriately adding, "It is rather too good—over-nutritious—for a man only doing sedentary work."

The peasant's "cheese fondu."

Mix grated cheese and eggs beaten as for an omelette, adding a little new milk or butter. Place the mixture in a saucer-shaped pan which bears the fire, over which it is to be gently cooked, stirring well until the whole is dissolved, and the mixture is homogeneous; serve it in the pan, and eat it with a good supply of bread, and with salt and mustard to taste.

Mattieu Williams' suggestion.

Mr. Williams further suggests that a small quantity of bicarbonate of potash may be added with advantage to the ingredients before cooking—say 15 or 20 grains for a dish sufficing for two persons. It appears to facilitate solution of the casein, and at all events cannot be an unwholesome addition. Indeed, as he observes, it supplies potash salts, which are naturally present in meat, but which are wanting in cheese. By adding bread crumbs, or slices of bread, and more milk, an excellent savoury pudding may be made, and baked in a pie-dish, or in a shallower one if preferred. This preparation may be easily rendered an elegant one for other tables if required.

Quitting the subject of wheat and the leguminous seeds, it will be interesting to review briefly the combinations of rice, which furnishes so large a portion of the world with a vegetable staple of diet. Remembering that it contains chiefly starch, with nitrogen in small proportion, and almost no fat or mineral elements, and just sufficing perhaps, with a small quantity of the former, to meet the wants of an inactive population in a tropical climate, the first addition necessary for the people who dwell on the temperate margin of this limit, and just beyond it, will be a notable proportion of fat, and with it a little addition of nitrogen. Hence an illustration of one of the first efforts to make a dish of rice "complete," is afforded by the addition of butter and a little Parmesan cheese, in the simple *risotto*, from which, as a starting point, improvement, both for nutritive purposes and for the demands of the palate, may be carried to any extent (see p. 164). Fresh additions are made in the shape of marrow, of morsels of liver, etc., of meat broth with onion and spice, which constitute the mixture, when well prepared, nutritious and highly agreeable. The analogue of this mainly Italian dish is the *pilau* or *pilaff* of the orientals, consisting, as it chiefly does, of rice lightly boiled in the broth of a fowl, a basis susceptible of various slight modifications and additions (see p. 167). The curry of rabbit or of poultry and the kedgeree of fish are

Rice as food.

Needful additions in the "risotto,"

as a "pilaff."

further varieties which it is unnecessary to describe. Following the same combination to Spain, we find it a popular national dish, not greatly differing from the foregoing, in the *pollo con arroz*, which consists of abundance of rice, stewed with meat-broth and containing morsels of fowl, bacon, and sausage, with appetizing spices, and sufficing for an excellent meal.

"Fowl with rice."

Another farinaceous product of world-wide use is the maize or Indian corn. With a fair amount of nitrogen, starch, and mineral elements, it contains also a good proportion of fat, and is made into bread, cakes, and puddings of various kinds. It is nearly complete, but capable of improvement by the addition of nitrogen. Hence, in the United States, where it is largely used, it is often eaten with beans, under the name of "succotash." In Italy it is ground into the beautiful yellow flour which is conspicuous in the streets of almost every town; when made into a firm paste, by boiling in water, and sprinkled with Parmesan cheese, a nitrogenous aliment, it becomes what is known as *polenta*, and is largely consumed with some relish in the shape of fried fish, sardines, sausage, little birds, or morsels of fowl or goose, by which, of course, fresh nitrogen is added. Macaroni has been already alluded to in connection with wheat, from which it is made; although rich in nitrogenous and starchy materials, it is deficient in fat. Hence it is boiled and eaten with butter and Parmesan (*à*

Maize.

Polenta.

l'Italienne) and with tomatoes, which furnish saline matters, with good meat gravy or with milk (see p. 163).

Nearer home the potato forms a vegetable basis, in composition resembling rice in abundance of starch, but with much less proteids, and requiring therefore additions of nitrogenous and fatty elements. The Irishman's inseparable ally, the pig, is the natural, and to him necessary, complement of the tuber, making the latter a complete and palatable dish. The everyday combination of mashed potato and sausage is an unconsciously made illustration of the same principle. In the absence of pork, the potato eater substitutes a cheap oily fish, the herring. The combination of fatty material with the potato is still further illustrated in our baked potato and butter, in fried potatoes in their endless variety of form, in potato mashed with milk or cream, also as served in the ordinary way with *maître d'hôtel* butter; finally arriving at the most perfect and finished combination in the *pommes de terre sautées au beurre* of a first-class French restaurant, where it becomes almost a *plat de luxe*. Even the simple bread and butter or bread and cheese of our own country equally owe their form and popularity to physiological necessity; the deficient fat of the bread being supplemented by the fatty elements of each addition, the cheese supplying also its proportion of nitrogenous matter, which exists so largely in its

The potato requires fatty matter.

Bread requires butter or cheese.

peculiar proteid, caseine. So again, all the suet puddings, "short cake," plum cakes, pie-crust, or pastry, whether baked or boiled, which consist simply of farinaceous food rendered stronger nutriment by the addition of fatty matters contained in the butter, lard, milk, and eggs, inevitably used in making them. All are illustrations of the same principle practically applied by their inventors, without the slightest consciousness that they were fulfilling a natural and essential law of life.

In the same way almost every national dish might be analyzed, up to the *pot-au-feu* of our neighbours, the right management of which combines the nutritious quality of flesh with the abundant aroma and flavour of fresh vegetables, together with their useful saline constituents, which enter so largely into this economical and excellent mess (see pp. 138, 139). Among the poorer classes this dish is, of course, intended to supplement a considerable quantity of bread, which contains the efficient complement of carbo-hydrates.

All the foregoing dishes are the simplest forms of "complete" food.

It will be apparent that, up to this point, our estimate of the value of these combinations has been limited, or almost so, by their physiological completeness as foods, and by their economical value in relation to the resources of that great majority of all populations, which is poor. But when the inexorable necessity for duly considering economy has been complied with, the next aim is to render food as

easily digestible as possible, and agreeable to the senses of taste, smell, and sight.

The hard labourer with simple diet, provided his aliment is complete and fairly well cooked, will suffer little from indigestion. There may be a sameness in the small range of foods within his reach; but he eats with appetite and zest, for, after all, "hunger is the best sauce." He cannot be guilty, for want of means, of eating too much, fertile source of deranged stomach with those who have an unlimited supply; physical labour being also in many circumstances the best preventive of dyspepsia. "Live on sixpence a day and earn it," attributed to Abernethy as the sum of his dietary for a gluttonous eater, is a maxim of value, endorsed by millions. But for the numerous sedentary workers in shops, offices, in business and professions of all kinds, the dish must not only be "complete;" it must be so prepared as to be easily digestible by stomachs of moderate power, and it should also be as appetizing and agreeable as circumstances admit.

CHAPTER V.

Food of the middle-class Englishman, and its routine—Cookery, the process of rendering food digestible and nutritious by heat—First, heat applied through water—(*a*) Boiling—The process described—The effect of temperature in coagulating albumen—Treatment of meat in cooking depends solely on this action—Temperatures observed by thermometer during process of boiling—System of slow cooking at low temperatures—The "Bain Marie"—Captain Warren's pot—The Norwegian cooker—Boiling of vegetables—(*b*) Steaming—(*c*) Stewing and braising—The distinction between them—Slow cooking at low temperatures and its value—Receipt for cooking a ham thus in thirty-six hours—*Bœuf à la mode*.

ON questioning the average middle-class Englishman as to the nature of his food, the all but universal answer is, "My living is plain, always roast and boiled"—words which but too clearly indicate the dreary monotony, not to say unwholesomeness, of his daily food; while they furthermore express his satisfaction, such as it is, that he is no luxurious feeder, and that, in his opinion, he has no right to suffer from an indigestion. Joints of beef and mutton, of which we all know the very shape and changeless odours, follow one another at his table in the same unvarying order, six roast to one boiled, and have done so ever

Indifference to cookery among middle classes.

since he began to keep house some five and twenty years ago! I am not sanguine enough to suppose that this uniform routine, which rules the dietary of the great majority of British families of moderate and even of ample means, will be disturbed by any suggestions of mine. Nevertheless, in some younger households, where habits, gradually forming through the force of example, have not yet hardened into law, there may be a disposition to adopt a healthier diet and a more agreeable variety of aliment. And this, it may be safely affirmed, will probably not be discovered by any researches for new forms of animal food. Often as the lament has been uttered, that some hitherto unknown product in the shape of meat or bird, cultivated or wild, is not to be found, seeing that the butcher's shop affords so small a range for choice, it is not from such a source that wholesome and pleasing additions to the table will be obtained.

But the consideration of variety, and the method of attaining it, will occupy us hereafter. At present we must deal with the "Roast and Boiled" already referred to. These are, in fact, the Alpha and Omega, not as two terminal items in a series, but as constituting the sum total of the culinary forces known to our respected paterfamilias, excepting that he may, perhaps, admit with more or less hesitating approval, that the frying-pan, as a kitchen utensil, is certainly not to be entirely forgotten.

"Roast and Boiled."

But of these processes, the principles which govern their application, and the elementary rules of the art in making it, he knows nothing, having never felt interest therein. His cook probably knows little more. She learned by "rule of thumb," and has always found its light suffice for the limited requirements hitherto made on her powers in such service. When she has to prepare one of the aforesaid joints, whether by "boiling" or by "roasting," it has probably never occurred to her to inquire what temperature the meat should attain in order to achieve her purpose, by either method; nor, to tell the truth, was she ever curious about the matter. And there are not many mistresses who could inform her respecting the principles referred to, whatever familiarity they may possess with the practice of the culinary art. But an acquaintance with principles tends largely to facilitate the perfect exercise of all art; hence I shall very briefly sketch those which should be known, and are happily now being taught to the pupils who pass through a really efficient school of cookery. Completely ignored by all the old kitchen manuals and receipt books, being, in fact, unknown to their writers, they are equally wanting in some of the most popular modern guides to cooking. A few teachers and authors have learned to insist on their importance and expound them; but these are at present exceptions to the rule.

Ignorance of the principles of cookery.

No true art without understanding them,

yet rarely explained in manuals.

First, in order to illustrate what I mean by principles, I will define cookery as almost invariably implying a process of rendering various foods, whether animal or vegetable, which cannot be agreeably or safely eaten in their natural state, attractive, digestible, and nutritious, by the application of heat through different means or media, and at greatly differing degrees of temperature.

Cookery, a process of rendering food attractive and nutritious by heat.

I shall briefly consider, first, the process of cooking food through the medium of water, employed at a temperature of 212° Fahr., as (*a*) boiling; by the steam only of boiling water, as (*b*) steaming; afterwards as (*c*) stewing and braising, in which lower temperatures than boiling are adopted, while the process is continued for a much longer period.

Various methods used.

Secondly, will follow the process of cooking food in dry heated air, as in (*a*) baking; or by radiation of heat from a clear fire, as in (*b*) roasting; or on a grill above it, commonly known as (*c*) broiling.

Lastly, the process of cooking by immersion in oil at a much higher temperature than can be obtained by any boiling in water, which is "frying."

First, the cooking of meat by means of boiling water, although this is really effected in the interior of the portion or joint considerably under the boiling temperature. Water "boils" when heated to 212° Fahr. at the sea-level; but to attain the best results from cookery,

By means of heated water: "boiling."

a much lower temperature may be employed, as we shall learn hereafter; "boiled meat" being, in fact, never really boiled throughout. It should also be remembered that the heat obtained by the act of boiling varies in proportion to the elevation of the spot above the level just named, at which the process takes place. Thus, water boils at a temperature several degrees lower for every thousand feet of elevation; therefore in mountain climbing, it is quite possible to reach a height at which water boils when not sufficiently hot even to cook an egg efficiently, which can be done at 180°.

Two modes of thus cooking meat;

Now, in the culinary treatment of flesh of all kinds and of fish, by water, the object to be attained by the process must first be distinctly apprehended. If from a given portion of flesh it is desired to extract as much of the soluble portions as possible, as for the purpose of making soup or beef-tea, the course pursued will be directly opposite to that which is necessary when the object is to prepare the portion for a dish to be consumed at the table. In the latter case, we desire to retain all the nutritive and sapid qualities of the meat within the portion, leaving none in the water used for cooking. In the former case, we leave the flesh, if possible, exhausted of flavour and nourishing juices, nearly all of which we desire to find in the water employed.

The principle relied on to accomplish our aim in each case is based on the fact that the albumen,

which pervades both flesh and fish, is fluid and soluble at low temperatures, say above the freezing-point up to about 150° Fahr., while it gradually becomes more solidified and insoluble at temperatures of about 160° and upwards. Hence, if we desire to realize the first-named object, for stock soup or beef-tea, some meat, previously cut fine, is macerated for two or three hours in cool or tepid water, after which the temperature is very slowly raised to about 150°, and maintained there for some time. At the end of the process, not only much soluble nutritive matter referred to as albumen, but other valuable constituents, "extractives," and salts, will be found dissolved in the liquid also. See the process for making beef-tea, which will be found in the Appendix.

depending on effect of heat on albumen.

1. For beef-tea;

If, on the contrary, we desire to retain within the portion, say a leg of mutton, all its nutritive quality and its natural juices and its flavour, for a dish at table, the joint is to be immersed in a capacious pot of boiling water, to which a little salt has been added, and kept boiling for from five to seven minutes. The object of this is to solidify or coagulate, as it is usually termed, a thin layer of albumen on the entire surface of the joint. By this means, the meat is enclosed in an impervious casing, which effectually prevents the escape of all the fluid albumen of the

2. For cooking a joint,

commence with boiling

a few minutes to seal the surface;

interior, and of the salts into the surrounding water, however long the joint remains there. When the boiling has continued for the short time named, nothing will be gained by maintaining that high temperature; it is, on the contrary, rather injurious than otherwise. The meat will be in better condition at table if the pot is removed a little from the fire, so that a temperature of six or eight degrees below boiling is sustained for the usual period of time required, which, of course, varies according to the size of the joint. This is what is understood by the term "simmering." Maintaining the water in a state of constant ebullition involves a large waste of fuel, and does not raise the temperature, either of the liquid or the meat a single degree.

then a continuous lower temperature; "simmering."

In order to ascertain what is the maximum temperature attained by "boiling" a leg of mutton in the usual way, I have several times pushed a self-registering thermometer, provided with a pointed metal end, closely alongside the central bone to the middle of the joint; and have never found, however thoroughly the meat has been cooked, that the mercury has risen above 186° or 187°; it has generally been a little below that limit. Let me say that such experiments have been made many years ago, I believe thirty or forty. At least twelve or fifteen years have elapsed since it was repeated by myself in both boiled and roasted meats in order to

Experiment to ascertain heat of interior of joint while cooking.

ascertain by personal observation that in each case meat could be well cooked at the temperature named.

During the last winter, 1897–98, I have repeated these experiments very carefully, expressly for this edition, taking note of the exact result on each of the trials, twenty-four in number. They are as follows:—

No.	How cooked.	Name of joint.	Time of cooking.	Temp. found.
			hours.	Fahr.
1	Boiled	The top side of the round: beef	2½	187½°
2	Braised	Ham, slow process, p. 110	36	170°
3	Boiled	The top side of the round: beef	2½	182°
4	Roast	Sirloin of beef	2¼	186°
5	Boiled	Tongue	5	193°
6	,,	The top side of the round: beef	2¼	186°
7	,,	Leg of mutton	2½	185°
8	Roast	,, ,,	2	187°
9	,,	Sirloin of beef	2	190½°
10	,,	Leg of mutton	2	187½°
11	,,	Ribs of beef, rolled	2	184°
12	,,	Turkey	1	184°
13	Boiled	Top side of the round: beef	2¼	186½°
14	Roast	Sirloin of beef	2¼	187½°
15	,,	Saddle of roe venison from Black Forest, Germany	1	176°
16	,,	Leg of mutton	2	187°
17	,,	Top side of the round: beef	2¼	185½°
18	,,	Saddle of mutton	1½	185°
19	,,	Leg of pork	2	183°
20	,,	Leg of mutton	2	184°
21	,,	Sirloin of beef	2	188°
22	,,	Fillet of veal	2½	184½°
23	,,	Top side of the round: beef	2	185°
24	,,	Sirloin of beef	2	185½°

But it has long been known that for the purpose of thoroughly cooking flesh of any kind, there is no necessity to maintain so high a temperature as that adopted by the ordinary method above described,

Lower temperatures cook best if enough time is given.

provided that the time of exposure to the lower degree of heat is considerably prolonged. There is a generally accepted table, current in all cookery books, indicating the time which every joint requires, grounded on its weight; but this always presupposes the boiling point of water, of course to commence with, and almost boiling sustained by continual combustion of fuel afterwards. The flavour of animal food is, by the system of prolonged low temperature referred to, better, and the meat itself more tender and more digestible; a result which will inevitably bring into favour the practice of slow cooking when the best methods of conducting it have been adopted.

Why cooking at low heat makes flesh digestible.

That flesh so treated is easily digested is due to the fact that at the temperature of 170° to 180° the albumen contained therein is sufficiently cooked but not overheated and hardened. Any temperature higher than the above-named tends to solidify it, and when exposed to too much heat, as often happens to a fried or over-broiled steak, it then becomes diminished in thickness and curved instead of being plump and tender, while the shrunken and indurated fibres of the over-cooked portion are difficult of digestion by an average stomach.

An excellent mode of securing the desired object in boiling is to move the pot containing the portion of meat, as soon as the initial boiling of six or seven minutes is completed, to a small gas ring or

lamp, by which a gentle heat, that is, between 180° and 190°, can be maintained for five or six hours or more, instead of the two hours usually required, say for a joint weighing twelve pounds or thereabout.

The "Bain-marie" is an old and very simple application of the principle chiefly employed for the heating of sauces and for other purposes where it is desirable to avoid a temperature which might injure a delicate product, and especially any burning of it. It is simply a small thin saucepan suspended within a larger one adapted for the fire, and containing water which, when boiling, or nearly so, suffices to heat to a few degrees below its own temperature the contents of the inner vessel. This resembles the method on which the carpenter's glue-pot is constructed, with which most persons are familiar.

The "Bain-marie."

Captain Warren's cooking-pot is a further development of the same principle, which has long been a favourite with many who appreciate excellence and economy combined in the work which it is capable of doing. It is constructed on the plan of the "Bain-marie" just described, but is associated with a steam chamber on the top, to be used or not when required. This latter may be used for the cooking of vegetables, fish, and other foods, thus utilizing the steam formed by the boiling water contained in the larger outside vessel, which heats the inner one. But the inner is used not

Captain Warren's cooking-pot.

only for stewing and boiling purposes, but also as a dry cooker; for no steam can enter it from without, however used; that is to say, a fowl or a portion of meat being placed therein can be slowly cooked *without water* by a process occupying about twice or three times as long as that employed for ordinary boiling or roasting. In this case the flesh furnishes a quantity of liquid, slowly disengaged by low temperature, rising as vapour at first, and becoming condensed, with its own natural juices, into a broth or gravy, in which, at the conclusion of the process, the flesh is found partially or wholly immersed. On the top of this floats more or less fat in a melted state, and this can be removed in the usual manner. No loss whatever takes place by this method. All the albumen, extractives, and juices of the flesh will be found in the inner saucepan when the process is completed. Thus a most admirable and tender Irish stew may be made by placing, say about three pounds of neck of mutton, cut chiefly from the lower half of it in the usual way, or improved, of course, by including some cutlets from the upper, with most of the fat removed, a little onion, sliced, adding no liquid whatever, only a little black pepper and salt to taste. The outside pot should contain sufficient water to form a shallow bath for the inner pot which contains the meat; the water should be boiling at the

Its use in "dry" cooking.

No loss by this process.

How to cook an Irish stew thus.

Example of slow cooking at low temperature.

commencement of the process, and for about a quarter of an hour afterwards, to antagonize the effect of the cold meat introduced. Then the pot should be removed to the corner of the fire, or over a gas ring, so as to maintain the external bath water at or about boiling point. At the end of five or six hours or so the meat will be found perfectly tender, delicately cooked, full of flavour, and amply supplied with its own excellent gravy. In fact, the cooking has been finally completed by means of a braise consisting of the gravy thus produced. When the melted fat has been removed, the potatoes, which have been partially cooked in the upper chamber or steamer, or in some other vessel separately, should be added to the meat in the inner chamber for about half an hour before serving in the usual manner, and a little stock added if required.

The meat has been cooked at a temperature of about 185° or 190° at most, never approaching 200°: hence its digestibility from the circumstances explained above. If the potatoes for the stew are cooked in the steamer, above the meat, the water must be kept boiling during the latter part of the process, about an hour, to supply steam for the purpose. The above, or a good-sized fowl, can be cooked in a Warren pot of the smallest or least expensive size; but I advise that a fowl should be first boiled in a separate vessel for five minutes only for reasons already given. Some think it an improvement to

Cooking of poultry in same manner.

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add about half a pint of warm stock, to make, with the juices which escape, the basis of an excellent sauce when skimmed and thickened. And on the whole I think that poultry may be generally "boiled" with advantage in about a quart of light stock, when the ordinary process with a saucepan is used; in either case adopting the slow process by low temperature, *i.e.* about 170° Fahr., any of the liquor not required for sauce going to the stock-pot for white soups and sauces. And larger portions of meat may be cooked in the same manner in Warren pots of appropriate size.

But still lower temperatures suffice if more time be devoted to the cooking; and this is advantageous where the material to be cooked is unusually tough. An illustration of this principle has been familiar to some for many years, in the action of the Norwegian cooking apparatus; but few people know how effective a prolonged moderate temperature is in producing tender and well-cooked viands of various kinds.

Norwegian cooking apparatus.

This apparatus consists of a stout tinned iron cylinder 12 ins. high and 10 ins. in diameter, with a handle like that of a pail, which renders it portable, and a well-fitting cover. It is lined with a close packing of woollen materials 1½ ins. thick, to prevent the escape of heat from the inner vessel, which contains the portion to be cooked. This vessel, also a cylinder, is made of tin, and has a "hot-water jacket" to be filled with boiling water, the only

Construction described.

source of heat for the entire cooking operation. And its cavity, measuring 7 ins. in depth and 5½ ins. in diameter, will hold a fowl weighing over two pounds in the vertical position, or the best end of a neck of mutton containing five bones when neatly trimmed; and this latter should be accompanied with a few slices of onion and a little black pepper and salt, nothing else.

The following mode of using it has been employed in my own kitchen, and the temperatures taken by myself. A fowl weighing two or two and a half pounds is put into a four or five quart saucepan, boiling on the fire or gas stove. Ebullition ceases for half a minute, owing to the coldness of the body introduced, and then reappears: it should be continued actively, but for five minutes only. Then remove at once and place it without addition of any kind in the central cavity of the Norwegian cooker. Boiling water is next to be poured in to fill the hot-water jacket which surrounds it, and the lid made fast. But no fluid of any kind is put into the cavity with the fowl. The apparatus is now accurately closed, and set aside in a corner, screened from draughts, but not near to any source of heat, after which it is to remain untouched for eighteen or twenty hours. On opening it the fowl will be found perfectly cooked and tender throughout, and the temperature of the liquor will be from about 80° to 90°. This should be skimmed from all

Practical directions for using it.

Results.

fat, and serve as a basis for the sauce. The initial boiling is of course intended to seal the surface, and to prevent the juices of the bird from escaping; but some portion will of course find its way out into the cavity, and is to be utilized in the manner suggested, so that no particle is lost. The fowl can be served at once, masked with a good white sauce or otherwise, according to taste. The same process and time will cook mutton admirably. It will be quite tender, and its juice is also served as gravy in the dish. Vegetables can be cooked apart to garnish, chosen either for the purpose of a "haricot" or for an "Irish stew."

No waste possible.

Process for mutton.

A most useful lesson is thus afforded to illustrate the power of a low temperature, if continued long enough, to cook meat thoroughly, and at the same time to render it tender and digestible. It is not necessary, however, to adopt this apparatus for ordinary purposes. Equal results can be obtained in a shorter time by the Warren pot for all practical purposes, following the directions before given.

A few words are necessary here respecting the boiling of vegetables; some of these are perhaps better steamed, a question which will be considered below. For the most part, green vegetables are better boiled. They should be first thoroughly washed, to free them from dirt and insects, but not allowed to soak for an hour or more in water, which only does harm.

Boiling of vegetables.

Preparation.

When ready to be cooked, they should be put into a saucepan of boiling water, to which salt has been added at the rate of a tablespoonful to half a gallon; and if the water be hard, a very small quantity of soda should be used also; if rain or any other soft water can be obtained, no soda should be employed. They should be kept briskly boiling during the time required, and generally without the saucepan-lid; and the cooking should commence so as to be finished exactly at the time they are required at table, as they take injury by being kept standing for any length of time before they are served. It is best to transfer them at once, after careful draining, into hot vegetable dishes. Nothing looks more slovenly and disagreeable than water drained from the vegetables occupying the bottom of the vegetable dish. It should be remembered in boiling peas that soda is never to be used; it destroys their delicate flavour; if any addition is made, besides the usual quantity of salt, it should be a little sugar.

Use of soda.

Boiling peas.

b. Steaming, for various purposes, especially for cooking fish and some vegetables, is preferable to boiling, because so much of their best constituents is lost by the latter process. Respecting its applicability to fish, see the chapter on the subject. Vegetables are deteriorated by the loss of their saline elements in boiling water: this is strikingly evident in the case of potatoes, which, peeled and boiled as they usually

b. Steaming

potatoes,

are, become insipid, in comparison with those which are steamed or boiled in their "jackets." The value of the jacket is well-known to the Irish peasant, who rarely or never removes it until the tuber is cooked.

and other vegetables. But other vegetables, such as cauliflower, broccoli, brussel-sprouts, etc., should be steamed for the same reason, although the colour is not so bright and clear as when boiled, as they usually are, with a little soda added to the water.

The steamer. A simple steamer consists of a saucepan half-filled with water kept at boiling, and replenished as it wastes, with a cylindrical receiver for the fish or vegetable, of about equal capacity, fitting to its top when the lid is removed, to take its place at the top of the receiver instead. This receiver admits through its base, which is perforated with small holes, a constant atmosphere of steam at 212°. The cooking is thus effected with but very slight loss of the saline elements referred to.

c. Stewing and Braising, processes by which meat and poultry are prepared and served in the most tender condition possible, and in an attractive form for the table, are somewhat neglected in this country. There is a marked distinction between "braising" and "stewing" not sufficiently recognized here; hence, probably, the infrequency with which a true braise appears at our tables.

Stewing. This consists in nothing more than a

long cooking in water at low temperature. Applicable to either beef or mutton, from which most of the fat should be removed, the meat should be placed, more or less divided into small portions with the bones belonging thereto, in an enamelled saucepan with a moderate quantity of water, a few vegetables for flavour, very little salt, and some pepper to taste. The cover being put on, it should be placed over a small gas ring or charcoal, or on a portion of the hot plate, where it cannot rise to boiling-point. In fact, the temperature should never be above 170°, and continue three, four, or six hours according to the quantity; at all events, until the meat is quite tender. The coarser and even tougher portions become by this process very digestible, appetizing, and nutritious. Much the same result may be obtained in the "Warren's cooking-pot" already referred to.

Stewing.

On the principle by low temperature.

A standard illustration of effective stewing or common braising exists in the production of a well-known French dish, *bœuf à la mode*, which is always good, when served in a simple, inexpensive manner for the people, and may be rendered most excellent with more care and refinement, so as to be suitable at a table of the highest rank. I shall subjoin Gouffé's receipt; he regards the process as an important and typical one, and gives it at length. See Appendix, p. 288.

Stewing; "bœuf à la mode."

Braising. Of this there are two methods, one simple, another more complex. In the former, the meat may be just covered with a strong liquor of vegetable and animal juices (technically called *braise* or *mirepoix*) in a closely covered vessel, from which as little evaporation as possible is permitted, and is cooked in the same manner as that above recommended here for stewing. By this treatment tough fibrous flesh, even if old, whether of poultry, of cattle, or meat unduly fresh, such as it is difficult to avoid during the summer heat in towns, is made tender and easily digestible. Moreover, it becomes impregnated with the odours and flavour of fresh vegetables (carrots, turnips, celery, onions) and sweet herbs, while the liquor itself, slowly reduced in the process, furnishes the most appropriate, fragrant, and delicious sauce, with which to surround the portion when served at table. Thus, also, meats which are dry, or with little natural flavour, as veal, become saturated with vegetable juices, and combined with sapid substances, which render the food succulent and delicious to the palate. Small portions sufficing for a single meal, however small the family, can be thus dealt with ; so that a *réchauffé*, or cold meat for to-morrow, is not a thing of necessity, but only of choice when preferred.

Braising ; two methods ; what it accomplishes ; should be more popular than it is.

To judge by the braised products which rarely appear on English tables, and by such descriptions of

it as exist in our cookery books, the process itself is scarcely understood. Certainly it is not one uniform method, to which the term is applied, and consequently an ordinary cook's conception of it is apt to be somewhat loose and indefinite.

The first principle essential to a braise is, that the meat so to be treated must be very slowly cooked, that is, at a comparatively low temperature, and in a closely covered vessel, and with a small quantity of liquid. **Principles of braising.**

The second principle is, that the meat shall be impregnated in this process with the flavours of vegetables, herbs, of highly flavoured cured meats, and some spices, and, if desired, with wine. This may be done without the *mirepoix* above described, namely, by placing in the braise-pot around the meat, slices of ham, smoked sausage, or bacon, cut carrots, parsnips, turnips, onions, various herbs, a bay leaf, cloves or other spices, together with a small quantity of good meat stock. Another way of conducting the braise, as already intimated, is to make beforehand a strong decoction of all these materials, with stock and wine, serving in part to flavour and in part to preserve the liquor or *mirepoix*, so that it may be kept for a time, ready for use when wanted. A small quantity of this is then to serve as the fluid in which the portion of meat or bird, etc., is to be braised.

Perhaps no better illustration of the process can be afforded than the method of cooking a ham, which I have adopted for a good many years, with

results known to not a few of my friends, as successful in producing this favourite dish as a hot *entremet*, full of flavour, while the lean portion is absolutely tender and digestible.

I have carefully formulated the steps of the process here, after experiments at different temperatures, and times devoted thereto.

Receipt for cooking a ham,

Receipt for cooking a ham at a low temperature long continued.—I prefer a thick, plump ham, say from 10 to 12 lbs. for a moderate sized party (12 to 16), York or Cumberland by choice. It must first lie some hours in cold water; if a highly smoked one, and you desire to retain the flavour, 8 or 10 hours will suffice; if it is not much smoked, but has been fully salted, it should remain 12 hours or more. This process should be concluded at least 36 hours before the hour fixed for dinner.

to occupy 36 hours.

Previous preparations.

As soon as it is removed from the cold water, scour with a softish scrubbing brush, so as to remove all dirt from the surface.

You will have already prepared the day before a good meat stock well flavoured with vegetables, carrots, turnips, parsnips, onions, and a faggot of kitchen herbs.

The ham is to be placed in an oval cooking-pot just adapted to its size; sufficient of the above stock to cover the ham is to be added, allowing room for a few slices of the fresh vegetables just named to be put in also. Place the pot on the fire, and bring the stock

soon to the boiling point, maintaining this for five minutes only, no more. Then withdraw the pot from the fire so that the stock may gradually cool to a temperature about 170°, but not exceeding that. Keep it thus 12 hours. For this purpose it is best to place it over a gas ring, which is easily regulated; and to have a thermometer which ranges up to 212°, the boiling point, precisely like a "bath thermometer," that is, with a tin receptacle at the lower end guarding the bulb, only that the bottom of the receptacle should be cut away for kitchen use, otherwise organic matter would lodge there, soon decompose, and become noxious.*

Temperature never to exceed 170°.

Suppose at the end of this time that by means of the thermometer, and by adjustment of the gas, that the temperature has been steadily maintained, preparation must be made for leaving it for the night, so that the temperature shall not henceforth exceed 150°; on the other hand, it shall not fall below 130°. With a little observation, it is easy to ascertain how much gas suffices to do this during the night; and a small quantity of fresh stock to fully cover the ham is added the last thing. The cover of the pot being always on, the loss by evaporation is very small; but towards the close of the process, the stock may be allowed to diminish one-third or so of the original quantity.

* Negretti & Zambra, Regent Street, supply these made as described. See frontispiece for thermometer used.

You will examine the thermometer on arriving at the kitchen in the morning. It may be found perhaps a little less than 130°, which is a smaller error than a rise above 170°. With a sharp skewer ascertain in two places at least whether the ham is becoming tender. If it is quite so, all you have to do is to let the temperature be about 140° or so during the day until the next step in the proceeding. If still not tender enough, let it be 160°. If quite tender, let it be 130° or so.

The wine added.

Supposing you have arrived at about four hours before the time for serving, the ham is now taken out and skinned in the usual manner, then returned to the pot, together with a bottle of good wine emptied into it, which, of course, reduces the temperature. Raise this gradually to 140° as before. If a red wine, let it be a good mid-quality Burgundy; or a good red Italian wine may suffice. If white be preferred, a bottle of fair Sauterne or Graves.

The sauce.

The temperature last named is to be continued until the ham is served. The remaining contents of the pot are now to be carefully skimmed to remove fat, a portion strained through a tammy without addition, reduced to a glaze in a small saucepan, and served in a sauce-boat apart. Or, if preferred, a cherry or other acid-sweet sauce may be substituted. I strongly recommend the former for a ham which is served hot.

It is very easy to overcook a ham in 36 hours, so

that the flesh falls from the bones, and can scarcely be cut. It is equally certain that it will not be so, although it will be deliciously tender, provided that the rules above given respecting the temperature are followed. **Caution.**

The third principle in braising is not generally considered essential to the process, although it is undoubtedly the last refinement necessary to produce a first-rate example. It is that of partially browning or half-roasting the portion also ; and this may be accomplished in two ways. The legitimate or original way of doing this, is, to have well fitted to the braise-pot a sunk copper or iron cover, in which some hot cinders or charcoal are placed, towards the end of the process, when the braise is nearly finished, in order to transmit downwards a scorching heat to the top of the portion which is uncovered by the liquid in the pot below. The upper surface of the meat thus obtains that browning of the surface which is the crowning addition to other flavours, before referred to as "the taste of the fire." In treating it thus, the portion should be covered, especially if a fowl, with a piece of white paper, which serves to shield a delicate morsel from a too fierce heat. The other and inferior way is to very lightly roast the meat, before putting it into the pot to braise, and so dispense with the hot cinders or charcoal on the cover ; but this hardens the flesh, and tends to prevent the juices penetrating it, and cannot be recommended.

It may be seen, then, that a braise in which no

roasting is employed, does not, after the necessary materials have been prepared, require a great deal of attention, if the cook knows the corner of the fire or hot plate, where the slow and very gentle temperature will maintain itself regularly for three or four hours.

CHAPTER VI.

Secondly, cooking by dry heat in hot air—(*a*) Baking—In dry compartments heated by steam—Becker's process and others—Atkinson's American oven—The English kitchener—(*b*) Roasting—The "taste of the fire"—Its attractive peculiarity—(*c*) Broiling, another illustration of this—The process explained—The third method, cooking by high temperature in heated oil or frying—Process explained—A careful attention to minute particulars necessary to insure success—The omelette—Opposite principles in French and English cookery considered—Superiority of each in certain particulars.

THIS chapter will be devoted to the application of heat in dry air for various processes of cooking ordinarily thus conducted, being the second method referred to at the opening of the last chapter, leading finally to the third and last method, viz. the use of the highest temperatures, obtained by "frying" in heated oil.

Secondly, the application of heat in dry air by the processes known as "baking," "roasting," "broiling." **II. Cooking in dry air.**

(*a*) Baking.—Cooking in closed vessels, ovens or other compartments in dry heated air, whether the heat is obtained from adjacent fires, or from steam

at a high temperature externally applied, may be regarded as a process of baking. The latter mode in which successful cooking is thus accomplished, without hardening the albuminoid tissues of meat, has been adopted on a large scale for institutions where the demand is constant and uniform in kind. A good example of this is the apparatus patented by Becker, of Berlin (1882). The principle consists in ascertaining the temperatures best adapted for cooking each kind of food—for example, for making soup; for producing tender flesh, juicy, and not over-dried; and for serving vegetables in a condition adapted for digestion. The highest temperature of the three is generally demanded for the last-named, or the longest exposure to heat; for the starch cells throughout the tissue must be burst to scatter their contents, before the required condition is attained. Different compartments in the apparatus are maintained at varied temperatures by regulating the steam supplied to each, and the economy in fuel thus effected on the large scale on which this method is applied is considerable. This plan was adopted and systematically applied a few years ago by my friend, Mr. L. O. Smith, of Stockholm, for the operatives and their families in that city; and detailed accounts of it were published at the time (1884) in this country. And the results were accepted as demonstrating the efficiency and the economy of cookery at low temperatures.

Becker's process; Berlin.

The Rev. Canon Moore Ede, of Gateshead, was attracted by Mr. Smith's successful use of Becker's apparatus, and visited Stockholm for the purpose of testing its value. He embodied his observations, which were in the highest degree favourable, in an admirable lecture on cheap food and cooking at Sunderland in 1884, which has since been cheaply printed, and had a deservedly large sale.* He employed for his cheap dinners for children a large box of sheet-iron, felted throughout inside, two and a half inches thick, and lined with tin-plate. Two gas jets will raise the contents (thirty gallons) to the boiling point, and a very small amount of flame suffices to maintain the lower temperatures preferred for as many hours as are required.

Rev. Moore Ede's experience.

Some twelve years or more ago, a very complete and efficient apparatus, adapted for all the uses of a small or large family, was designed and thoroughly tested in America by Mr. Edw. Atkinson, of Brookline, Mass. He first introduced the apparatus to the public as the "Aladdin Cooker," for boiling, stewing, etc., and has rendered it more useful and efficient for all methods of cooking, except broiling and frying, under the name of the "Aladdin Oven."

Mr. E. Atkinson's "Aladdin Oven."

* "Cheap Food and Cheap Cooking." London: W. Scott, 14, Paternoster Square. Price 1*d.* 1884. There are excellent hints on the management of penny dinners for school children. See also "Children's Dinner Tables," in the Appendix.

Much is often said of the economy effected by all these methods of slow cookery, on the ground of the smaller loss in weight produced by them, as compared with roasted meats. This is much less than would appear at first sight to be the case. It is quite true that a joint weighing fourteen pounds when roasted or baked may weigh only eleven, and if cooked in the low-temperature chamber may be finished at twelve pounds and a half. The difference in weight is due to loss of water only; the far-reaching cooking odours amount to nothing. These are produced by slight scorching of the surface, one result of which is a highly appreciated and appetizing flavour in a very thin superficial layer, giving character to roasted and broiled meats, which cannot be obtained by any slow or closed-chamber process. Mr. Atkinson cleverly imitates the appearance of a roast in colour and dryness of surface by slightly buttering the outside of the joint to be "roasted," and covering it with fine crumbs, or better still, the raspings of a French roll, which will give a browner and a crisper covering. But a true roast which "tastes of the fire" can only be really produced in front of a well-prepared open range.

Question of economy considered.

The principle on which all of them act is to prevent the escape of heat by constructing the oven of materials which are thoroughly non-conducting, and therefore do not consist of metal, invariably employed for kitchen ranges. Metal conducts heat away

rapidly, and requires constant supplies of fresh heat, a process which renders difficult the maintenance of an equable temperature, besides being costly through wasteful consumption of fuel. The thick sides of the Aladdin oven are made of indurated and incombustible *papier mâché*, or of a wood pulp, desiccated, which is practically almost the same thing, one of the best non-conductors of heat known, with a thin metallic lining; the interior cavity available for cooking, which is divided by movable horizontal partitions for different dishes, measuring from a foot to a foot and a half in every direction, in the sizes at present mostly used. The heat is supplied to the oven by means of an oil lamp below, or by gas; in either case the amount supplied being always under the control of the cook. The whole of this heat, or nearly so, is conveyed into the interior of the chamber—no admission of the products of combustion from the lamp or of gas with the air there being possible—to be utilized for culinary purposes. A chimney is unnecessary, as the waste products of the small flame required are inconsiderable, and may escape into the apartment. There being so little loss of heat, the plan is admirably adapted for hot summer weather, since the stove radiates no perceptible warmth into the surrounding air. It is not intended for cooking rapidly, but at a rate during the day requiring fully double the time consumed by the common kitchen range, while for soup-making, stews, or any other

Construction.

Mode of using.

procedure which it is desired to accomplish at a low temperature, and by which the best results are attained, it should be left at work all night with a small jet of gas beneath as the only source of heat. Bread may be made in it very successfully when the boiling and baking processes necessary for a meal have been completed, and much heat remains still to be utilized.*

Cooking meat by radiation. (b) "Roasting."

(*b*) Roasting, or the cooking of meat by heat through radiation, and by heated dry air in front of a clear, bright fire ; the heat radiating from which into the "roaster," a metallic enclosure open towards the fire only, and containing the joint, turned therein by means of a bottle-jack. The fire, being at its best, the joint, poultry, or game, is placed very near at first—an analogous proceeding to the initial step in boiling—in order to seal the entire surface by coagulating its albumen at the outset, and so enclose the fluids securely within (see p. 95). This is accomplished in about eight to ten minutes for a large joint, or in four

* "The Art of Cooking," by E. Atkinson, LL.D. New York : Appleton. 1889. A paper reprinted from the *Science Monthly* for November, 1889, and other reports and papers subsequently.

Since that date Mr. Atkinson has carried his researches much further, embracing the economic and scientific bearings of food-production, the nature of man's wants in relation thereto, with their results in the form of dietetics appropriate under varied circumstances, in a work full of information on all these subjects, entitled "The Science of Nutrition, and the Art of Cooking by the Aladdin Oven," with directions and receipts. Boston : Damrell & Upham. 1896.

or five for a piece of poultry. The roaster is then drawn half a foot to a foot further back, so as to diminish the heat thenceforward. The opportunity of basting the joint, which, especially towards the close of the process, should be frequently done with dripping from the pan below, is one of the advantages of this mode of cooking, which cannot be secured by any process of baking in an oven. The surface would become over-dried by the heat, cracked, thus permitting vapours to escape, and even charred, were it not for the basting, which preserves it moist and flexible, and ensures only that precise degree of browning, with its agreeable aroma, which is found by a connoisseur so precious for its peculiar flavour and scent. Want of diligence in using the ladle, and of care in regulating the fire, occasions the fat to be decomposed and burnt with much evil odour and savour. Certainly the proper roasting of poultry and game is quite unattainable by any other method.

Gives opportunity for basting;

value of.

The well-known "taste of the fire," so appreciated by the *gourmet*, is produced by actual carbonization of the surface of the roasting portion of the food, and may be largely recognized as precious to man, far beyond the domain of cookery, strictly so-called. Within it, however, this specific quality gives character and value to the surface of all broiled and grilled meats; to those also which are well browned in frying; to a slice

The "taste of the fire."

of well-made toast (bread); to a thoroughly baked potato, the coat of which is partly browned and crackled; to the "black onion," which develops a marvellous sweetness by the same process; and almost always its peculiar charm to the pancake, which without it would be flabby and flavourless. All the character possessed by caramel, or browned sugar, is derived from the carbonization being carried so far only that a little sweetness should still linger, although a delicate aromatic bitter is produced, each flavour enhancing the attraction of its associate; while a new beauty, that of colour, also results. All the inimitable fragrance of coffee is an effect of the same remarkable change of which partial carbonization by heat is the agent. Then the burning of almonds, and the roasting of nuts in all their variety, furnish further illustrations of the principle.

So, carbonized wood, for the sake of the essential oils which are burned and volatilized in the rising smoke, the odours of which are thereby changed and communicated to salted meats and fish, thus conferring upon them a peculiar aroma with a slight bitterness of taste, as we all so well know, in smoked bacon, hams, tongues, herrings, haddock, and salmon.

Thus it is also to the sense of smell, so closely allied as it is with that of taste—of which I shall have to say something hereafter—that the odour of burning weeds and other vegetable matters is so delightful on a fine quiet evening in the country

as it floats in an atmosphere undisturbed by the breeze.

To return after this I hope permissible digression; a joint of meat may, however, be well cooked in the oven of an ordinary kitchener or complete cooking range, as now usually made, so as closely to resemble the result obtained by true roasting. The conditions are a good supply of heat, as far as possible from the top and both sides of the oven, the ability to ventilate when desired, a pan to catch the dripping beneath the grating on which the joint rests, that pan resting on another an inch or two deeper, containing water below, the evaporation of which maintains the dripping at a moderate temperature, rendering impossible its decomposition or burning with its all-pervading offensive odour. In this way the nearest approach has been made to accomplish in an oven the results achieved by roasting; and for joints of meat it is almost successful. It is not possible thus to acquire the effect which constant basting of the roast attains, and for game certainly the latter process should be employed. Those who desire to pursue this subject further are strongly advised to make themselves acquainted with a work, already referred to, by Mr. M. Williams. It deals with the subject very fully, while its lucid and interesting style renders it very attractive; moreover, it abounds in quaint and suggestive hints, and is valuable, particularly to those who desire to avoid

An attempt to roast in the oven.

Mattieu Williams' work.

needless expenditure, and to preserve an intelligent method in the exercise of the household economies.*

(c) Broiling; directions for;

(*c*) Broiling.—Respecting this, I shall say no more here than that the operation resembles that of roasting, but is applicable to a small portion of flesh, and can be rapidly conducted on the gridiron over a clear fire or upon a gas grill, which latter can be made available at a moment's notice. A clear and smokeless fire is often not to be had without considerable delay and preparation, and then must be exclusively devoted to the grill as long as this is required, to the exclusion of other processes, except those which are to be conducted on the adjacent hot plate. The object is to seal the surface of the meat by heat at first, not permitting the temperature of the interior to rise to a higher point than just suffices to render it tender, as it becomes filled and expanded by its own juices, which are yielded abundantly in the form of rich red gravy when the meat is cut by the consumer a few minutes afterwards. Hence the morsel, plump and rounded by the action of the heat, must not be touched by a fork, the perforations thus made permitting the rich natural juices of the meat to escape, but be turned when necessary with a pair of light tongs. The value of the grill is, perhaps, nowhere better understood than in England, especially in relation to chops, steak, and kidney; portions of fowl, or a

* "The Chemistry of Cooking," by Matticu Williams. London: Chatto & Windus. 1885.

split chicken, the bladebone, or even a small shoulder of mutton—all of which may be thus served in perfection by a competent hand. Still, it is not quite so widely appreciated as it deserves to be in the preparation of many a small dish of fish, fowl, and meat, or "a bone," to say nothing of a grilled mushroom, either alone, or as an accompaniment to any of them. And it may be worth while, perhaps, remarking that the sauce *par excellence* for broils is mushroom ketchup; and the garnish cool lettuce, watercress, or endive.

available for many little dishes.

Lastly, Frying.—Cooking by immersion in oil or melted fat at temperatures greatly exceeding that of boiling water, and popularly known as frying. This process is rarely understood, and is generally very imperfectly practised by the ordinary English cook. The products of our frying-pan are often greasy, and therefore for many persons indigestible, the shallow form of the pan being unsuited for the process of cooking at a high temperature in oil, that is, at a heat of about 350° to 390° Fahr., that of boiling water being 212°. This high temperature produces results, which are equivalent indeed to quick roasting, when the article to be cooked is immersed in the nearly boiling fat. Frying, as generally conducted, is rather a combination of broiling and toasting or scorching; and the use of the deep pan or bath of heated oil or dripping, which is

Frying,

and the rationale of process.

essential to the right performance of the process, and especially in order to prevent greasiness, is the exception, and not the rule in ordinary kitchens. A few words of explanation are necessary in relation to the temperature of the fat which forms the frying bath, a matter of importance to ensure satisfactory results. When a bath of melting fat is placed on the fire and the temperature has risen to 212°, some bubbles come to the surface with a hissing sound; these are due to a small portion of water, inherent in the solid dripping, especially if it has been clarified previously with hot water, so frequently necessary, which, being converted into steam, rise until all is got rid of. This is not the boiling of the fat, which is now tranquil, and when the temperature has advanced much higher, to something like 340°, a slight vapour is given off. If the fat is permitted to become much hotter, smoke appears, indicating a degree of heat to be avoided, and that the fat has reached what is called the boiling point, when it decomposes and spoils. Before this is reached, the heat should be tested by putting in a slip of bread, which if browned in a few seconds, a sufficient temperature has been attained, and the bath is ready for use. The above remarks apply equally to the temperature of any oil used for the same purpose. The principle on which success depends is, that at the moment of contact with the almost boiling fat or oil, a thin film of every part of the surface of the fish or other object

Practical directions.

Effect of high temperature.

to be fried is coagulated, so that the juices with their flavours, etc., are at once locked up within, and nothing can escape. The bath should therefore contain quantity sufficient to permit the complete immersion of the portion to be fried, and also be hot enough to effect this result in an instant, after which, and during the short time requisite to cook the interior, the heat is often slightly lowered with advantage. The fish or other material employed emerges when done, with a surface to which a little oil adheres, but this will drain off owing to its extreme fluidity when hot, if left on a napkin slanting a minute or two before the fire—better still, on white blotting-paper; and thus it may be served absolutely free from grease. The film of egg often applied to the surface of an object to be fried, is in the same manner instantly coagulated and forms an impermeable case; while the fine bread crumbs adhering to it take a bright yellow colour, being slightly charred or toasted by the high temperature they are exposed to. In order to be free from grease when served the bread or biscuit crumbs should be very fine, adhering by means of a very thin layer of egg previously applied by the brush. If the crumbs are coarse and the egg is used too abundantly, grease will adhere to the surface or be absorbed by it; thus a thick indigestible case covers the fish, a condition in which, unhappily, it commonly appears at table, even in the better class of hotels in this country.

Avoid grease;

Excellent and fresh olive oil, which need not be so perfect in tint and flavour as the choicest kinds reserved for the salad-bowl, is the best available form of fat for frying, and is sold at a moderate price by the gallon for this purpose at the best Italian warehouses. Nothing, perhaps, is better than well-clarified beef dripping, such as is produced, often abundantly, in most English kitchens; but the time-honoured traditions of our perquisite system sometimes enable an English cook to sell this for herself, at small price, to a little trader round the corner, while she buys, at her employer's cost, a quantity of pork lard for frying material, at double the price obtained for the dripping. Unfortunately, however, lard is the worst menstruum for the purpose, the most difficult to work in so as to free the matters fried in it from grease; and we might be glad to buy back our own dripping from the aforesaid little trader, at a profit to him of cent. per cent., if only the purchase could be diplomatically negotiated. But so sweet is acquisition by way of perquisite, that few of the present race of cooks appeared willing to part with this particular one for any consideration which can be offered. I am glad to learn, since the foregoing was written in an early edition, that a more honest system is coming into vogue. Well clarified dripping, consisting of the fat or suet about the kidney especially, with a small proportion of fat from cooked pork (not the lard of the shop), is said

the value of olive oil;

and of beef fat or "dripping."

by some of the first practitioners of the art to be the best menstruum to employ.

The omelette;

There is one dish which may be mentioned here appropriately, of which English cooks have not much practical knowledge; very few can make a tolerable omelette: and thus one of the most delicious and nutritious products of culinary art, with the further merit that it can be more rapidly prepared than any other dish of equal value, especially to the traveller, must really at present be almost regarded as an exotic. The method of proceeding is one which it is almost impossible to describe in writing, and no cookery book instructions which I have ever seen convey a notion of the necessary manipulation in which the whole art consists—to the uninitiated. Competent instruction at first and some practice are undoubtedly required, in order to attain a mastery in producing an omelette; but these given, there ought to be no difficulty in turning out an excellent specimen. The ability to do this may be so useful in the varied circumstances of travel, etc., that no young man destined for foreign service, or even who lives in chambers, should fail to acquire so desirable an accomplishment. It can only be done by learning it practically from an efficient teacher.

the making of it to be practically learned.

I have an observation to make relative to the general treatment of flesh in cookery (butcher's meat, poultry, and game), which finds its place appropriately here. It relates to one of the fundamental

principles of the culinary art, and should be considered by all who are interested in the subject before regarding questions of detail. I ask attention to it because I do not know that any writer has explained the origin of widely differing methods in the practice of culinary art, adopted in France and England respectively. These two distinct systems have been produced as the result of circumstances, the force of which may be easily recognized, dominating the treatment of flesh provisions particularly, on principles directly opposed to each other. One of these characterizes the best English cookery, while the other has been, and still is, to a large extent, the ruling principle of French cookery. Both are rational—each system, perhaps, the better of the two in its own place; and only illogical products and examples of defective taste can arise in practical cookery by confounding the two, an error, however, which is far from uncommon. In spite of the admiration which it is impossible to withhold for the talent of the French cook, it is nevertheless in France that the confusion I speak of is chiefly to be met with. And it is only in our own country, I venture to affirm, that the principle or system in question is carried out to perfection. The English principle is, that our own meat and game shall be presented at table in the highest state of perfection attainable, so far as breeding, feeding, and keeping can accomplish it,

Important characteristics of English and French cooking.

The English idea;

each animal, when served, to be characterized by its own proper flavour, which is on no account to be masked or disguised by others, which are adventitious. Delicate additions tending to heighten the natural flavour, or agreeably subordinated to it, shall alone be admitted. It is a principle which can be successfully followed only where these meats exist in high perfection: where meat is inferior or insipid, an opposite treatment is the better one. And I do not hesitate to claim for the intelligent English consumer, that it has long been essentially his aim to cultivate the best meat and game in the world, and to enjoy its intrinsic qualities for their own sake, unalloyed by any of those additions in the form of finely flavoured sauce, which are so valuable for improving materials which do not possess their own distinctive fine qualities and flavours; while his proximity to the seashore and numerous streams enables him to enjoy fish of all kinds absolutely fresh and in the finest condition.

perfect within its limit.

The opposite principle is that which has been developed in association with the production of meats and poultry which are naturally somewhat insipid. Since it has not been the custom to rear in France fine mature beef or mutton, as we understand those meats here, but rather to consume almost exclusively an immature product, veal, as well as poultry, much of which although the best of its kind, is naturally wanting

The French idea;

in sapid characters, these have become, and rightly so, the vehicles of various delicious adventitious flavours, for the purpose of displaying which the white meats are valued, rather than for their inherent qualities. This character of veal is illustrated in a passage occurring in the first number of the famous *Almanach des Gourmands*, which appeared in Paris at the commencement of the present century:—"Veal lends itself to so many metamorphoses that we may fairly term it 'the chameleon of cookery.'" * Precisely the same view is held by Brillat-Savarin, but in relation to poultry, when he says, "Poultry is for cookery what canvas is to the painter." † In such conditions, therefore, it is natural that the French cuisine should be essentially distinguished for its sauces, by which it adorns and transforms material in itself somewhat uninteresting or uninviting.

its value and utility.

The Englishman loves the flavour of three or four years' old mutton (unhappily almost a tradition now), mature beef, the wildest game, both winged and ground; and he cares not how little of "sauce" is supplied—he demands only "gravy"—so that these are in fine condition, sufficiently, not over-kept, and simply cooked, for the most part carefully roasted. To lard fine full-flavoured tender mutton or venison is, for him, to desecrate them; to lard or farce a grouse

Comparison of the two in practice.

* *Almanach des Gourmands*, p. 17. Paris: 1803.

† "Physiologie du Goût," p. 30. Paris: 1843.

or partridge is the reverse of a compliment equally to the game, if mature, and to the guest, if a connoisseur. A young and tender English partridge is not improved, I venture to submit, even by larding, although the reverse is true of quail.

The French *chef* treats the white meat, veal and domestic poultry, with so many ingeniously contrived sauces, as to render those two meats as good as six. So successful is the achievement, that he is too often tempted to extend his art to dark-fleshed game, and seeking to adorn it with new flavours, destroys the original savour and aroma, in which consists for us the value of the dish.

French appreciation.

During the last few years, however, I have been happy to observe signs of a change in the practice of the best French cooks in this respect, as well as sometimes to find meats of better and more mature kind in Paris than formerly. One of the best illustrations of the value of the principle I have above referred to as that of old English cookery, I met with a few years ago, served to myself and a friend, in an excellent and well-known restaurant very near the Place de l'Opéra.

A happy illustration.

It was brought to me as a novelty, and the method of realizing the idea I concede to be so, and in its way perfect in execution. It consisted of a very fine wild duck, simply but lightly and delicately roasted, and served without an atom of sauce. The *maître d'hôtel* having placed the bird before us on a dish heated by a spirit lamp

below, cut three long handsome slices on each side of the breast-bone, beautifully red although perfectly cooked, and full of natural juice, removing thus, in fact, all that is prime and really worth eating. Leaving these in the hot dish and replacing the cover, he placed on the table before us a powerful nickel-silvered press, the size of a tea-urn or samovar, put the whole of the remains of the bird into it, and with a few turns of the lever, applied the screw so as to express when the tap was turned a sufficient quantity of hot, rich, red juice to serve as our only, and indeed most exquisite sauce. The only admissible additions would be the scent of a fresh lemon and a few drops of its juice with a grain or two of Nepaul pepper; or a little well-made Bigarade sauce (see my receipt at p. 154).

Refined additions possible.

The pinions, legs and back, indeed all but the sliced breast, had been thus compelled to yield all their fluids, in the form of about a coffee cupful of what might be called the very essence of the bird. Such treatment precisely accords with our own view of what is the best, and was most admirably realized. Let us continue to cultivate the finest meats and game, presenting them when in the most perfect condition for the table, and serve simply, or with only such subordinate adjuncts as tend to heighten, not to obscure, the natural character of the original. We shall then have no cause to be ashamed of the course in which they appear at an English table.

But I freely concede that in making the best of second-rate and insipid morsels, we have still a good deal to learn, on the score of sauces, garnish, and serving, from the great school of culinary art in France.

CHAPTER VII.

Soups—Not sufficiently esteemed—Better understood in France—*Pot-au-feu*—The "stock-pot"—*Bouillon*—*Consommé*—Endless varieties produced from these—Three distinct classes of soup—1. The clear: of meat, fowl, and game; and vegetables or *maigre*—2. The thick or *purées*: of the same—Various illustrations of these—3. More substantial soups: turtle, ox-tail, and other examples—*Bouillabaisse*—Soups, *gras* and *maigre*—Receipts for vegetable soup—Practical hints in making the above.

Soups neglected by many;

I THINK it may be said that soups, whether clear (that is, prepared from the juices of meat and vegetables only) or thick (that is, *purées* of animal or vegetable matters), are far too lightly esteemed by most classes in England, while they are almost unknown to the working man. For the latter they might furnish an important cheap and savoury dish; by the former they are too often regarded as the mere prelude to a meal, to be swallowed hastily, or disregarded altogether as mostly unworthy of attention.

an important form of diet for all.

The great variety of vegetable *purées*, which can be easily made and blended with light animal broths, admits of daily

change in the matter of soup to a remarkable extent, and affords scope for taste in the selection and combination of flavours. The use of fresh vegetables in abundance—such as carrots, turnips, parsnips, artichokes, celery, cabbage, sorrel, leeks, and onions—renders such soups wholesome and appetizing. The supply of garden produce ought in this country to be singularly plentiful; and, owing to the unrivalled means of transport, all common vegetables ought to be obtained fresh in every part of London. The contrary, however, is unhappily the fact. It is a matter of extreme regret that vegetables, dried and compressed after a modern method, should be so much used as they are for soup by hotel-keepers and other caterers for the public. Unquestionably useful as these dried products are on board ship, and to travellers camping out, to employ them at home, when fresh can be had, is the result of sheer indolence or of gross ignorance. All the finest qualities of scent and flavour, with some of the fresh juices, are lost in the drying process; and the infusions of preserved vegetables no more resemble a freshly made odoriferous soup, than a cup of that thick brown, odourless, insipid mixture, consisting of some bottled "essence" dissolved in hot water, and now supplied as coffee at most railway stations and hotels in this country, resembles the recently made infusion of the freshly roasted berry. It says little for the taste of our countrymen that

Utilizing vegetables advantageously.

These should be fresh.

such imperfect imitations are so generally tolerated without complaint.

Example: the national French soup.

How different is the result of intelligent cookery, as we find it exemplified in the simple national soup of France. Here the appetizing odours of fresh meat and vegetables are discerned with pleasure, the moment a *pot-au-feu* enters the room. Relative to this dish so much has of late appeared in public prints, failing to explain what is understood in France by it, that I think an accurate description of what it really is may prove acceptable here.

"Pot-au-feu"

The *pot-au-feu* is a composite dish which produces, first, a simple, but not strong, beef broth (*bouillon*), well flavoured by fresh vegetables; secondly, a somewhat over-cooked and exhausted piece of beef (*bouilli*), which is served after the soup; and, lastly, the vegetables themselves.

differs from the "stock-pot,"

This is a different thing from the common "stock-pot" of the French peasant, so frequently termed a *pot-au-feu*, and confounded with it. The primary object of a "stock-pot" is to make a decoction or basis for soup—of animal food, if possible—and every morsel of flesh, poultry, trimmings from joints, bones well bruised, etc., which are available for the purpose, are reserved for it. To the pot of the peasant, who wastes nothing whatever, all things are welcome; and every atom of nutritive material—solid or liquid—goes into it, to which are always added herbs and vegetables,

together with the liquor in which any of the latter may chance to have been boiled. But sometimes it is a *pot maigre*, no meat of any kind having been procurable; and very good vegetable soups, moreover, are educible therefrom, of which more hereafter. Then again, besides, or instead of the slices of bread which are usually put into the broth when served, the good wife now and then cleans a fresh cabbage, boils it in water, as much as possible of which she removes by pressure in a cloth, then puts the cabbage for a few minutes into her pot, and finally serves it as a welcome addition to the dish. But in none of these forms can the true *pot-au-feu* be recognized; and no Frenchman who has the least acquaintance with the national cookery will allow it to rank as one.

"gras," or "maigre."

The *pot-au-feu* has for its object, as already stated, not only the making of a well-flavoured *bœf* broth, but the cooking of a portion of the beef to be eaten separately after, either cold or hot, according to taste, together with the vegetables necessarily associated with it. Formerly, this *bouilli* always appeared at an ordinary French table immediately after the *bouillon;* but although still retaining some nutritious elements, it is not much esteemed, certainly by those who can afford better food, and it has gradually disappeared during the last few years. So the *pot-au-feu* has come to signify at ordinary tables only a soup, and it may appear at the best tables in that capacity; still,

Products of the "pot-au-feu."

strictly as a beef broth, but of the most perfect kind, well seasoned and flavoured by herbs and vegetables. The well-known soups so admirably served at a good Paris restaurant as *paysanne* and *croute-au-pot* respectively, are but slight modifications of the original *pot-au-feu.*

The stock-pot.

To return to the family stock-pot. This has, on the Continent, especially in families of the middle class, another use beside that of preparing a basis for soup. Thus when a boiled fowl is required, it is a common practice to conduct the process in the liquor of the stock-pot. Any nutritive matter, however small, which might have been lost in the water used in ordinary boiling, is saved for the soup, while a fowl boiled in stock is certainly preferable when it comes to table, to one which has been boiled in water. And so with many other articles; for example, a small and well cleaned ham may be cooked—and this is an affair of several hours—in a capacious stock-pot, with advantage equally to the soup and the ham, provided, of course, that the latter has previously been soaked some hours to remove superfluous salt; nor should any salt be put into the stock-pot itself when required for this operation.

"Grand bouillon."

But besides the *bouillon* of the *pot-au-feu* there is the *grand bouillon* also, a distinct and elementary product of French cookery. This is a decoction, stronger than the preceding, of the flesh of beef and veal, together with a portion

of supplementary bone and sinew, all fresh and uncooked, in order to add gelatine; and this is combined also with vegetables. Lastly, there is the *consommé*, which is a decoction of beef, veal, and fowl, the two latter partially roasted for the purpose of heightening flavour; and it is made, not with water, but with *bouillon*—Gouffé orders the *grand bouillon* just described—and with a few more vegetables. This is, therefore, the highest form of soup from beef, veal, poultry, and vegetables which can be produced (see Appendix, "Consommé"). "Consommé."

Now, as the mode of making *pot-au-feu* is an important initial step in the art of soup-making, I shall place in an appendix at the end of this volume, a carefully made epitome of the very complete instructions given by Gouffé. The right management is with him a matter of the highest importance; and, simple as the dish is, he devotes several pages to the task of illustrating the elementary principles of cookery which are involved in the process.

It is not at all surprising that many persons should be somewhat bewildered by the almost endless variety of appellation under which the single article of soup is presented at table. It has been estimated that the titles which denote these numerous varieties number altogether not less perhaps than five hundred. And proceeding on the principle on which these are produced, there appears to be no reason why even the present list should not be doubled in length. In Soup nomenclature; varieties endless,

reality, the number of species is very limited; but the slightest addition to a soup having been held sufficient to confer upon it a distinctive name, the idea of complexity and number has been unnecessarily fostered. Regarded analytically, all soups may be considered as belonging to three chief classes—the clear; the thick, or *purées;* and a more substantial form, in which the soup approximates somewhat to that of a stew, containing solid matter in considerable quantity. In each of these classes there are four or five species, from which all varieties are produced by slight additions and combinations of flavour.

species very limited,

First class, the clear soups, viz.—

1. A clear decoction (weak, or "broth;" strong, or *consommé*) of meat: of beef, veal, sometimes mutton; and of pork in the form of ham or bacon.
2. A clear decoction of fowl.
3. A clear decoction of game.
4. A clear soup made from various kinds of turtle, but always garnished with portions of turtle itself.
5. A clear decoction of vegetables only, as the basis of a *soupe maigre.*

to wit;

Any of these may be used as made at first hand; but great variety may be obtained by making some slight addition, such as with the well-known dried Italian pastes in numerous forms, also specially made paste (*nouilles*

How varieties are made.

and *quenelles*); or with freshly made custard, cut into diamonds, circles, etc., in various colours; cut fresh vegetables, in rounds, in squares, in long strips, fresh, or lightly fried before adding them; with crusts of bread, with an egg, etc.; each single addition denoted by a distinctive appellation, which will suggest itself in each example named above, to any one who has the least acquaintance with cookery. **Additions.**

Second class, the thick soups, or *purées*.—The *consommé* of beef, or of veal, beef, and fowl mixed, or of game, may be thickened by addition of a flesh, fowl, and game *purée* respectively; white soups, commencing with a *consommé* of veal and poultry, thickened with a *purée* of the white meat of fowl, with a portion of cream or milk added; and brown *purées* following, from *consommé* of beef and veal, and of game. **Second class: "Purées." Animal.**

The same *consommé*, or the weaker broth, furnish bases for vegetable *purées* in like manner, either white or coloured. Many of these, like the others, have their distinctive names; *e.g.* *purée* of carrot as Crécy, of potatoes as Parmentier, of fresh green peas as St. Germain, of red haricots as Condé, of lentils as Conti, or adding vegetables prepared as for a *julienne*, it becomes Faubonne; while a *purée* of Jerusalem artichokes, curiously enough, and by virtue of a bad pun, is called Palestine. The last named should, of course, have a basis of fowl or veal broth, and added milk or cream. **Vegetable purées.**

And the same stock, blended with a well-prepared *purée* of pearl barley, will furnish a very agreeable *crême d'orge.* Many soups in ordinary use assume a pleasant change, if a small quantity of tapioca is incorporated by long and gentle simmering, until almost dissolved, from the fulness and softness thus communicated to the original.

Thirdly, a class of more substantial soups, containing a considerable amount of solid matter; examples of these may be named as follows:—

Mock-turtle soup; containing large portions of the calf's head, garnished with balls of seasoning, the liquid portion being thick, not clear.

Ox-tail; containing a considerable amount of meat in a more or less clear broth or *consommé.*

The well-known "giblet soup" and the "cock-a-leekie" of North Britain are examples of poultry thus treated; the latter, doubtless designed originally to present the patriarch of the poultry yard in an eatable form. Another Scotch soup, "hotch-potch," like an Italian "minestre," or "minestrone," may contain almost a meal of fragrant combinations of flesh, vegetables, and herbs in variety. Another to be named here is a thick mulligatawny soup, which is, in fact, a diluted curry, of which, by the way, there is now a clear variety.

Fish purées.

An important group of the thick soups have their origin in a *purée* and decoction of fish, of various kinds, as well as of so-called shell-fish, which of course are not fish at all, but

animals of other and totally distinct species. The former have a basis of liquor obtained by stewing the heads, bones, fins, and other cuttings from inferior parts of the fish, garnished with fillets from the choicest parts, and also with oysters, mussels, etc. The latter kind, from "shell-fish," are oyster soups, besides *purées* of prawns, crayfish, etc., and known as *bisques;* often very finished products of the culinary art.

Bisques.

The thick turtle soup is also more or less a *purée*, to begin with, to a certain extent, but its distinctive character is derived from its garnish, consisting as it does of the choicest parts of the animal.

Thick turtle.

The edible turtles belong to the class of reptiles, and there are varieties, large and small, all highly esteemed as food in various parts of the world.

Real turtle, clear, is made either in part or wholly from the live animal; a large proportion is prepared from the imported dried flesh; in either case the stock is almost invariably made from veal and beef.*

* A rather keen but amusing controversy took place in consequence of my having stated in a paper read at the Fisheries Exhibition in 1883 that turtle soup when "*at its best*" was composed of a stock made from the conger eel, the turtle furnishing the garnish and the name. The turtle-soup makers rushed into print, especially some well-known artists at the East End of London, who used language which was more remarkable for force than for elegance. Never was there a more striking illustration of the proverb, "*qui s'excuse s'accuse.*" No accusation had been brought against any turtle-soup maker: I had

"Bouillabaisse."

Finally, I must not omit some mention of that delicious dish, *bouillabaisse*, eaten in perfection at Marseilles, as among the most agreeable products of French cuisine in this direction. Thackeray's well-known rhymes do not exaggerate its good qualities, and enumerate its component elements almost with sufficient accuracy to direct the cook.* See chapter ix. on the subject of fish as food, for remarks on its selection and preparation for receipts or fish soups and stew, including directions for preparing a *Marsellaise bouillabaisse.*

Thackeray's description.

Distinctions in soups for "fasting."

Then there is an important distinction, referred to above, recognized chiefly on the Continent, and related to the demands of religious observance, between soups which have meat for their basis (*potage gras*), and those which have fish, or exclusively vegetable basis (*potage maigre*); into the latter class also, eggs are admitted. All these take rank of course among the

merely expressed the opinion given above; one which I still think is correct. Much less had I anywhere affirmed that the artists above alluded to had ever made turtle soup "at its best!"

* "This Bouillabaisse a noble dish is—
A sort of soup, or broth, or brew,
Or hotch-potch of all sorts of fishes
That Greenwich never could outdo:
Green herbs, red peppers, mussels, saffern,
Soles, onions, garlic, roach and dace;
All these you eat at Jerré's tavern
In that one dish of Bouillabaisse."

The Ballads.

classes named; but they are referred to separately here in order to draw attention to a fact not generally recognized in this country, that tolerably good soups may be made without employing meat.

Vegetable soups, both clear and thickened, may be made extremely palatable; the former being agreeable and wholesome, especially in the warm season when fresh vegetable growth is abundant, and full of juice and fragrance. And the latter, or thick soup, may be made nutritious also, as already shown, since they contain a considerable quantity of barley, peas, beans, haricots, Indian corn, rice, etc. **Vegetable soups.**

The following is a good receipt for a clear, purely vegetable stock :—

Slice two carrots, two turnips, a head of celery, two onions; put into a frying-pan with a few sweet herbs and half a pound of butter. Fry until well browned, then put them with three or four cloves, some salt and black pepper, into six pints of cold water in a saucepan; bring to the boil and gently simmer for two or three hours, reducing to four pints, not less; strain off into a vessel, letting it stand for use. When required, pour off the clear liquor, leaving the deposit, and you will have a fair vegetable stock. If it is to be used as a clear vegetable soup, heat, adding at the close two tablespoonfuls of "cornflour" previously mixed smooth in some of the liquor, and letting the whole boil; if any scum arises remove it. The cornflour **Clear vegetable soup.**

gives to the decoction an agreeable body. Or, five or six ounces of tapioca may be added at the outset, which will thicken without interfering with the transparency of the decoction. The soup may be garnished with vegetables freshly cooked for the purpose, in slices or other forms (see Gouffé's receipt in the Appendix).

How to make a meat soup.

To convert this into a meat *consommé* add after boiling, and just before serving, two full teaspoonfuls of the Liebig Company's Extract of Meat.

A gelatine body.

Another mode of giving body when a soup *maigre* is not required, is to make a decoction of beef-bones without meat, which have been thoroughly broken and allowed to simmer gently at least six hours; then cooled, and skimmed from fat. The result, which is a strong jelly, can be warmed, strained clear through flannel, and used instead of water with which to make the vegetable soup as above directed; it adds substance and quality, but of animal matter in place of the cornflour employed for the preceding.

Vegetable purée.

Thickened vegetable soups may be made with these stocks, or with a weak meat stock, by rubbing in smooth, well-made *purées* of almost any vegetable matter. Those most commonly used are from green peas, potato, spinach, carrot, turnip, artichoke, tomato, salsify, etc., or from dried vegetable products, as split peas, lentils, haricots, rice, arrowroot, semolina, etc. A potato *purée*,

garnished with well-boiled leeks cut in sections, is a very palatable dish, and worthy of the esteem it has long enjoyed among our Dutch and Flemish neighbours.

I may conclude this brief sketch of soups by observing that the ability to make a good, fragrant, and clear *consommé*, yet fine in colour with a certain softness and smoothness of body—and nothing is easier, granted a moderate intelligence and the power of executing simple details with care—affords the key to almost all. The preparation of vegetables and the making of *purées* are merely mechanical processes, easily attained. The judgment necessary to add and combine spices, essences, and other sources of flavour, for soups, sauces, and sweet *entremets*, is the one element which when possessed, in addition to the character of an attentive, dexterous, and painstaking workman, essential to success in every profession, constitutes a finished cook, and denotes his or her rank. And thus it is that the department of sauces especially gives opportunity to develop and illustrate these qualities; and here it is that the artist's skill is most clearly manifested.

The title of "cook" does not belong to one who cannot make a good consommé.

CHAPTER VIII.

Sauces — The two chief foundation sauces, the brown or *Espagnole*, the white or *Velouté* — Their derivatives — English melted butter—*Maître d'Hotel*—*Ravigotte*, etc.— Author's receipt for *Bigarade* sauce — Garnishes—Their variety and use in supplementing dishes—Cookery of vegetables *à l'Anglaise* and *à la Française*—The tomato—Macaroni—Best modes for preparing for the table—Rice: various ways of preparing—The value of mincing in preparing flesh for food—Cold meats, the service of—Aspic jelly—Salads, in variety.

Sauces.

I SHALL commence with a brief sketch of the system on which the numerous list of sauces, which are offered for our service in cookery, is constructed. This will at all events give the tyro an idea of order and arrangement which presides over the practical management of the various sauces used in hot dishes of meat, game, and poultry. But the reader who desires to become thoroughly acquainted with the principles and practice of sauce-making, a subject too recondite to be dealt with at length here, should consult a first-rate French authority, as unquestionably the highest on this subject.*

* I can scarcely recommend a better than the classical work

Sauces are numerous, although less so than are soups, for each must have a real and distinct quality, to which it owes its existence, and is required to impart to some article of food for which additional flavour is desired. It may be said that there are but two chief foundation sauces, or "mother-sauces," as the French term them, a brown sauce termed *Espagnole,* and a white one named *Velouté,* or *Allemande. Bechamel* is reckoned as a "*sauce mère*" also by some, but it is merely a variety of *Velouté* with an addition of cream, making the sauce richer; while *Allemande* differs chiefly by the addition of

Only two really foundation sauces: "Espagnole" and "Velouté," or "Allemande."

of Gouffé before referred to. But it may, perhaps, be a little out of date in some details, although the leading principles must remain unchanged, and it is still an admirable guide to practice. For the purposes of the best English kitchens, "La Cuisine d'Aujourd'hui," by Urbain Dubois, E. Dentu, Paris, 1889, pp. 760, is a storehouse of trustworthy information, and it is well illustrated. Price 12 francs. But for a modern encyclopædic work on the subject, including *la haute cuisine,* the following, by Dubois and Bernard conjointly, is beyond question the most complete :—

"Cuisine classique : Études raisonnées et démonstratives de l'École Française ;" deux grands volumes, 77 planches gravées ; Dubois et Bernard. 14 édition. E. Dentu, Paris. Prix 40 francs.

Since the last edition of this work appeared, a useful epitome of the subject has been made in a small and handy volume which should be in the hands of any mistress who desires to understand it, and is an excellent guide for the cook who has not been practically or systematically taught. It is entitled, "A Book of Sauces," by Mrs. Beaty Pownall. Chapman & Hall: 1896.

yolks of eggs and a little butter. These have been well called the Adam and Eve of cookery, whence most others have sprung.* For each of these there is a leason (*liason*), or thickening, in order to bind the elements together and give body to the sauce, known now more commonly as brown and white *roux* respectively. And here again one marks the presence of that potent quality before referred to, as the taste of the fire. For *Espagnole* demands not only a beef-stock but a proportion of smoked ham to insure the flavour in question; and its brown thickening is made by slowly heating flour until it is partially carbonized, and therefore browned by the fire being slowly heated, together with fine clarified butter, which becomes nut-brown in the process, and both impart a fine roasting flavour to the same. But the slightest burning of the butter is fatal, and is avoided only by making the process of heating a slow one, and carefully stirring the mixture in an enamelled saucepan constantly over a small gas ring—at any rate, not over a hot cinder fire.

White and brown roux.

Flavour of the fire.

* It appears to me quite unnecessary to recognize more than one brown "foundation sauce," viz. the *Espagnole*, in which the flavour of smoked ham is a necessary ingredient. A so-called "brown sauce" without it is only an ordinary glaze, a reduced *consommé* thickened with brown *roux*, and ranks only as a secondary variety of the above. The adoption of but one brown and one white leading foundation sauce will be appreciated by all practical cooks.

A white *roux* is made in the same manner, but with the finest flour unbaked, only well dried, and fresh butter merely clarified, mixed by stirring slowly over a still less degree of heat, and never permitting either the flour or butter to take colour. The brown and white *roux* will keep a few days in a cool place for daily use as required.

White roux.

This is all the space I can afford to this subject. It is an important elementary process, as the *pot-au-feu* is to soup making, and forms a key to the composition of many sauces.

English melted butter is regarded as the one sauce of our country, and if well and carefully made, is a very acceptable and wholesome vehicle for various additions, both savoury and sweet as required; while the ingredients are always at hand, and it can be quickly produced when required.

English melted butter.

Other sauces, which are distinct varieties of the *Velouté*, are, for example, *Maître d'Hôtel*, with the addition of a little finely chopped parsley and a little lemon juice; *Ravigotte* the same, with a little chervil and tarragon besides, etc. For *Mayonnaise*, *Remoulade*, and other forms of olive oil and egg mixture as sauce, see pp. 174, 175.

"Maître d'Hôtel," etc.

There is one sauce especially appropriate for wild duck, and scarcely less so to well-cured ham, either hot or cold, for which I have never yet met with what appears to me to be an adequate receipt. I refer to that known as *Bigarade;*

Bigarade sauce.

I will, therefore, give my own here. The following may be regarded as sufficient for ten or twelve persons to accompany three or four lightly roasted wild ducks, of which, of course, the breast slices are the only portions served. Put about one-third of a pint of well-reduced good brown sauce, which will form indeed a glaze, into a small saucepan for melting near the corner of the fire. Have prepared three Seville oranges, thus—remove the zest of two by scraping or with a bread-grater; add it, together with their pulp and juice passed through a sieve so that no pith or pips are present, to the glaze, and slowly bring to the boiling point, stirring well, and set aside, keeping it hot. Add a pinch of Nepaul pepper, with a small teaspoonful of castor sugar. Then pare very thinly the peel of the third orange, so as to remove with it no pith, in separate portions, which are to be cut into fine long strips like those used for *julienne* soup, but very much smaller. Put them into cold water in a very small saucepan and let them boil, removing it to stand aside, keeping hot for a few minutes. When ready to serve, pour off the liquid from the strips and add them to the sauce in the first saucepan, stirring well at the corner of the fire, adding a small wine-glass of dry Curaçoa at the very last, and send up, as well as the birds, very hot. If necessary, it may be passed through a tammy, but if properly made, it will not be so. It should be added that the Seville orange cannot be obtained in this country

Author's receipt.

before the first week of February, and as wild duck is often quite in season six or eight weeks before that time, the best flavoured oranges obtainable must be substituted for the former, but for a true *bigarade* the Seville is essential.

After sauces come garnitures. Respecting these a few hints may be given, for agreeable and even important additions may be made to most small dishes of animal food under this title of "garnish." Whether it be a small *filet*, braised or roasted, or a portion thereof broiled; a *fricandeau*, or the choice end of a neck of mutton made square and compact by shortening the bones; or a small loin, or a dish of trimmed neck cutlets, or a choice portion of broiled rump-steak; a tender ox tongue, a couple of sweetbreads, poultry, pigeon, or what not—the garnish should be a matter of consideration. Whether the dish be carved on the family table, as it often may be when its head is interested in the cuisine, or whether it is handed in the presence of guests, the quality and the appearance of the dish greatly depend on the garnish. According to the meat may be added, with a view both to taste and appearance, some of the following—*purées* of sorrel, spinach, chicory, and other greens, of turnips, and of potatoes plain, in shapes or in croquettes; cut carrots, peas, beans, endive, sprouts, and other green vegetables; onions (see p. 122), small or Spanish, stewed; cucumbers, tomatoes, macaroni in all forms; sometimes a few

Garnitures in variety.

sultanas boiled, mushrooms, olives, truffles. In the same way chestnuts are admirable, whole, boiled, or roasted, and as a *purée* freely served, especially in winter, when vegetables are scarce; serving also as farce for fowls and turkeys. While such vegetables as green peas, French and young broad beans, celery and celeriac, asparagus, seakale, cauliflower, spinach, artichokes, salsify, vegetable marrows, etc., are worth procuring in their best and freshest condition, to prepare with especial care as separate dishes.*

Vegetables served as "entremets."

And here, again, the distinctive principles, already referred to, of French and English cuisine, are illustrated in relation to the cooking of vegetables; and again, let me add, not always to the disadvantage of our own system.

French and English treatment of vegetables;

* A hint about boiling asparagus is worthy of mention, since the proper method is rarely followed by English cooks.

Asparagus of the stouter sort, always when of the "giant" variety, should be cut of exactly equal lengths, and boiled standing ends upward in a deep saucepan. Nearly two inches of the heads should be out of the water—the steam sufficing to cook them, as they form the tenderest part of the plant; while the hard stalky part is rendered soft and succulent by the longer boiling which this plan permits. Instead of the orthodox twenty minutes allotted to average asparagus lying horizontally, in the English manner, which half cooks the stalk, and over-cooks the head, diminishing its flavour and consistence, a period of thirty to fifty minutes, on the plan recommended, will render fully a third more of the stalk delicious, while the head will be properly cooked by the steam alone. One reason why it is not uncommon to hear the best produce of the fields of Argenteuil insufficiently appreciated here, and our own asparagus preferred, is, that the former is rarely sufficiently cooked at English tables.

I find it the more necessary to call attention to this subject, as much has of late been said, which may lead many to believe that French usage is invariably right, and English usage invariably wrong. Very far from the truth, I humbly submit, is such an allegation as this, even in regard of our treatment of vegetables. No doubt we are too often guilty of carelessness and inattention to the condition in which vegetables are presented, in the service of our tables, but our principle is in the main correct, and only wants to be pursued with intelligence. When vegetables are really good, well grown, and fresh, no good judge desires that their natural qualities of flavour, odour, and consistence, or even colour, should be destroyed by the addition of other materials, and of foreign flavours. Let us take two, in illustration of these remarks, green peas and the tomato.

Garden peas, *petits pois*, when young, quickly grown, and, above all things, freshly gathered, have a delicious characteristic flavour of their own, are rather sweet, and almost crisp when eaten; and they maintain these attributes unimpaired, if simply boiled in salt and water. Such should be eaten *à l'Anglaise*, the use of the term itself being a tacit admission on the part of the French *chef*, that the simple cooking advocated here, and practised in this country is, in this instance, justifiable. All that is produced under this name is a dish of peas, cooked as described, served with a pat of fresh butter, and some salt, accompanied by the capital

of green peas, for example.

little pepper-mill, which is natural to a French table, and almost unknown here.* A morsel of the butter is stirred into the hot peas, a little black pepper, full of fragrance, freshly ground over them, and a pinch of salt, according to taste, and the whole stirred. The same process is equally applicable to French beans, and also to that excellent mixture of French beans and *flageolets*, so well-known as *haricots panachés*, so rarely served in this country. All these vegetables, when in excellent condition, are doubtless served at their best *à l'Anglaise*, not only in relation to the palate, but also in view of the average digestion.

"Haricots verts," and "panachés."

To return to our *petits pois* as the type. When green peas are a little hard, old, and tough, or a little coarse in flavour, and without sweetness, then it is that the French cook treats them with advantage. For such peas as these, when no others are to be had—and it must be confessed that inferior peas are far too commonly met with—by all means let them be served *à la Française*. This is stewing gently in a little water, a good proportion of butter, with sliced onion and salt, stirring in a little flour, and a small quantity of sugar. Some, exceptionally, add a little cream, and yolk of egg. Another excellent French method,

To treat peas no longer young and tender.

* It was so when I first wrote, but has now for some time been growing in favour here, and may be seen at many tables and for sale in many shops. At the time referred to I could not have found a table pepper-mill in London, and obtained my own in Paris.

à la Paysanne, is to add first butter as before, salt and onion; and then stew slowly in a fair quantity of stock, with lettuces, finely sliced, some sugar, and a shred or two of parsley, if desired. Almost any peas may be rendered tender and appetizing if thus treated.

Again, *haricots verts sautés au beurre,* is a favourite mode of cooking them; but no superfluous butter should appear when they are served; the quantity allowed in which to toss them for a few minutes on a brisk fire, after boiling, should amount to no more, according to the rule, than a tenth part by weight of that of the vegetables themselves when dry.* **French beans "sautés."**

But who does not know that it is common enough, both in town and province throughout France, to be supplied not only with French beans, but other vegetables, saturated with butter, rendering them for most English stomachs, at all events, hazardous, and to some tastes repulsive.

The natural inference from all this is, that certain French methods are desirable, and their success is remarkable, when—as we have already seen in

* Some persons who have not studied practical cookery may not quite understand the French term *sauter*, or the corresponding English term, "toss." It means, to fry lightly or partially in butter, using a shallow pan, and, moving the material to be fried, or, rather, "tossed," so as to avoid the production of a temperature high enough to brown the surface—a condition which is intended to be produced by frying proper, as before explained (p. 125) to take place, by immersing the material in heated oil.

relation to both meats and vegetables—the materials are inferior; but the English method is the simplest and best, when the materials are—as they always should, when practicable, be—the best of their kind.

The tomato.

And now, briefly, for the tomato. In almost any condition, simple cookery alone is admissible for it. Doubtless, if ripe and fresh, it is excellent when eaten raw; but to have it at its very best, the tomato should be dipped, for thirty seconds at most, into boiling water. On removing it, the skin, which could previously be detached only with difficulty, peels off with the greatest ease. The juicy, fruity qualities are revealed by this process; and it may be eaten alone or with any meat; and for a salad it should invariably be thus prepared. If served hot, only plain boiling, baking, or broiling will cook this delicious half-fruit, half-vegetable, so as least to alter or diminish its natural flavour; although its deterioration has already commenced, since each of these processes develops a degree of acidity which before cooking did not exist, and is neither agreeable nor quite wholesome. It is excellent if served cold by itself, when simply peeled as above described, with a little salt and pepper, and perhaps a few drops of oil, with cold meat, or with savoury rice, or indeed in many ways. But to serve a hot tomato, by stuffing it with onion, parsley, and shalot, with some odds and ends of meat or poultry minced (*tomates farcies*), is mischievous meddling carried to its highest pitch!

Avoid over-cooking.

Yet this is the form in which tomato is most frequently served at foreign tables. Certainly, Talleyrand's well-known caution, "*Point de zèle*," applies no less forcibly sometimes to professional cooks, than as a maxim for diplomatists.

It is to be lamented that so little use is made in our country of the Italian pastes, especially of macaroni in all its forms; and that rice, largely used as it is, is not so well cooked, and therefore not so highly appreciated among the upper and middle classes as it deserves to be.

Macaroni.

The mention of macaroni conveys to nineteen out of twenty Englishmen, as it does also to our cooks, the idea of an indigestible mess, containing much toasted cheese and butter, well peppered and over-baked, which is sometimes served at the end of dinner as a "savoury" to complete the repast. In this form it ought rarely if ever to appear. Macaroni is, in fact, an aliment containing much nutritious matter when made from selected growths of hard wheat containing more gluten than the average grain used for bread. Such was the original practice when it was first produced, and doubtless still continues to be so for pastes of the best quality. The cheapest are probably made with ordinary wheat, and form therefore a good staple diet, especially if treated according to the methods given below. Most people, especially in summer, will find it a good substitute for the tough fibres of meat, particularly at lunch or midday

Valuable form of food.

meals, when their employments demand continuous attention during the whole of a long afternoon. To dine or to eat a heavy meal in the middle of the day is, for busy men, a great mistake: one nevertheless which is extremely common, and often productive of discomfort, to say the least. Macaroni might, with advantage to the public, and especially to those who are closely occupied between breakfast and dinner, be prepared at the restaurants as a staple dish, in two or three forms, since, if properly cooked, it sustains the power without taxing too much the digestion, or rendering the individual heavy, sleepy, and incompetent afterwards. Two or three of the best and simplest forms of serving it are embodied in the following receipts, which are the result of several experiments by different methods :—

An excellent lunch for the busy.

Put four ounces of good macaroni (Genoa or Naples), as little broken as possible, into a saucepan with three or four pints of boiling water. Boil five minutes, not longer. Then pour off all the water, and place the macaroni in a stewpan with a pint of good stock made from beef or veal, or both (or from a well-furnished stock-pot), adding a saltspoon of salt and half that quantity of pepper, and let it simmer at the corner of the fire until the macaroni is tender, not soft and flabby. The time necessarily varies, according to the kind and size of the macaroni, *e.g.* fifty or sixty minutes for the best

Author's receipt for macaroni cooked in stock; "macaroni au jus."

Genoese, from thirty-five to forty-five minutes for Neapolitan. Its condition, however, should be tested by trying a small piece. Most of the stock is absorbed by the macaroni by this time; but that which remains, probably a fourth part of the original quantity, may be strengthened, if necessary, by half a teaspoonful of the genuine Liebig's Extract of Meat, and should be thickened by adding a little baked flour or brown *roux* (see p. 152).

The contents of the saucepan should be served on a hot dish, or a shallow vegetable dish, or in a white metal bowl, in any case with a cover. It may be also appropriately and agreeably garnished sometimes with tomato sauce. The foregoing constitutes *macaroni au jus* in the simplest form.

Another for "macaroni à l'Italienne."

For those who can easily digest cheese and butter, an ounce of grated Parmesan, and perhaps half an ounce of good English cheese, may be added, gradually stirring well during the latter half of the process, towards the end of which a little pat of butter may be added, with a sprinkle of Parmesan over the dish when filled, before serving. The macaroni ought now to "spin" well, that is, delicate threads should extend from one portion to another when moved. Lastly, hot tomato sauce may be poured over it, or be supplied separately, since some prefer the macaroni without this addition. Serve on a hot dish provided with a cover. It is now a dish of *macaroni à l'Italienne.*

If there is only a weak stock, chiefly made from

bones, etc., in the stock-pot, use it, but add a rather larger portion of the Liebig's Extract. In such case, a little flour of lentils, well boiled to thicken the stock with, would be a suitable addition. The Liebig's Extract should never be added until the end of the process, and merely be well stirred in immediately *after* removing from the fire to serve.

The same with milk "au maigre."

If, instead of stock, milk is used, an agreeable change may be made; and this form constitutes *macaroni au maigre*, the foregoing receipts being *au gras*. To prepare this, boil four ounces as before five minutes; drain and place in a stewpan with a pint of milk, simmering as above directed until sufficiently tender. Serve hot. Any milk remaining unabsorbed by the macaroni may be thickened with baked flour (*white*) or with a white *roux*. Flavour with a little cinnamon or vanilla, or otherwise to taste, and sweeten with sugar or saccharin, if desired. For those who prefer a savoury dish, and can take cheese and butter, a tablespoonful of grated Parmesan, and a small pat of the latter, should be gradually added, stirring it in during the latter part of the simmering process, according to the directions just given for *macaroni à l'Italienne*.

Cooking of rice.

Of rice, the modes of cooking are endless, and yet few dishes are adopted here besides the well-known pudding with milk and sugar, with or without eggs; the moulds of boiled rice, variously treated, to be eaten with fruit; and rice,

rarely well prepared, for service with a curry. There is also no doubt that the boiled fowl and rice, *poulet au riz*, usually regarded as a convalescent's dish, might be easily rendered sufficiently attractive to merit the attention of others. As examples of nutritious, and at the same time very palatable savoury dishes, I will offer two examples, which might well be familiar dishes, at all events, on our breakfast and luncheon tables, viz. the *risotto à la Milanaise* and the *pilau* of the East. Varieties of the latter are common among all the populations dwelling adjacent to the Mediterranean, from Spain to the Levant. A dish of boiled rice being in some sort the culinary analogue in the vegetable kingdom, of veal and poultry in the animal, furnishing an insipid but wholesome basis, is well fitted to be the vehicle for producing innumerable flavours and odours, and even colours at the table, saffron, for example, and fruit juices; and is thus capable of furnishing various dishes, according to the treatment, and to the materials for addition, obtainable in different districts. As an example of this, I shall first describe the process of preparing that agreeable form, "red rice," to serve as a vegetable with boiled fowl, veal, or a mince, etc. Having washed about four ounces of Patna rice, put it into a saucepan containing a quart of boiling water with a little salt; stir with a wooden spoon, and in about ten to fifteen minutes ascertain if the rice has lost all hardness without being soft and the grains adhering. If so,

Receipt for "red rice."

empty the contents over a colander, and let all the water drain off; then return the rice to the hot saucepan, add a small pat of butter, about two or three tablespoonfuls of stock, and two of good Italian tomato sauce.* The saucepan is now to be put on a part of the hot plate, but not over the fire, and the contents should be merely kept stirring or "lifted" with the prongs of a silver fork for five minutes, so as to mix well and keep the rice grains separate, and prevent any portion being caught. Serve in a hot vegetable dish. Not only an excellent and appetizing garnish, it is also a delight to the eye.

Risotto à la Milanaise.

To make *risotto à la Milanaise* for two persons.—Put two ounces of fresh butter, with an onion chopped very fine, into a stewpan, and fry until the onion has a pale gold colour. Then add six ounces of well-washed Patna rice, with a very little powdered saffron, stirring it constantly for about two minutes with a wooden spoon, so that it does not stick to the stewpan; after this two minutes' cooking, add about a pint of good stock very gradually; let it simmer gently, stirring very frequently, till the rice is just soft; before it is quite finished, add an atom or two of grated nutmeg and an ounce or more, according to taste, of grated Parmesan cheese; after this, cook, stirring well for two or three minutes; then remove from the fire, set the stewpan on the hot plate, add a little more butter, cover for

* Perelli Rocco, Greek Street, Soho, furnishes an excellent sauce in small tins.

a few minutes, and serve. The quantity of stock or beef-tea can be varied according as the *risotto* is preferred thick or otherwise.

A Turkish pilau.

For a Turkish *pilau*, well wash six ounces of East India rice, and boil in a pint of water for five minutes at the most; then throw it into a colander that it may thoroughly drain. Next place it in a stewpan with an ounce of butter, salt and pepper to taste, stirring well, and adding by degrees about half a pint of good fowl broth. After about fifteen or twenty minutes it should be properly done, turning out with the grains separate. It is to be served perfectly hot. The foregoing is a true *pilau*, but additions may be made of portions of the meat of the fowl, of thin slices of bacon, or grated beef or ham; of a little curry powder; of chutney; of fried onions, mushrooms, etc. It can also be made with beef and veal broth and treated as above, but in none of these forms could be regarded as the true Oriental dish.

Receipt for boiling rice for curry.

After many trials, for the purpose of producing rice in its most perfect condition to accompany a curry, that is, with every grain separate, sufficiently cooked but not soft, and white as snow, I can recommend the following: Take six ounces of good Patna rice, sift, wash, and pick out all foreign seeds, etc. Throw it into a saucepan containing two quarts of boiling water with a small teaspoonful of salt and the juice of half a lemon, which makes it white. Stir with a wooden spoon,

and in about ten or twelve minutes the rice should be sufficiently cooked. This may be ascertained by pressing a few grains, which should be still firm, but softened throughout, without a hard portion in the centre. If so, add a pint of cold water to check the boiling at once, and then drain all the water from the saucepan, leaving the rice therein only. Set it on the hot plate, covered, not by the lid, but by a napkin, so that the rice may dry, giving it a shake or a stir occasionally, when every grain will be separate. Serve on a hot dish with cover until it reaches the table.*

Mincing.—There is an important mode of preparing flesh for food, especially for the purpose of

* The above receipt is based on the instructions given in one of the best practical cook's guides I know, a work written by an accomplished officer of her Majesty's service in India, "Culinary Jottings: a Treatise in Thirty Chapters," etc., by Wyvern. Fifth Edition. Madras: Higginbotham & Co. 1885. A most interesting and suggestive work to the European, although designed for Anglo-Indians. In my opinion no culinary library, even of modest pretensions, is complete without it.

The foregoing note, which has appeared in two or three previous editions, I purposely retain in this also, for Colonel Kenney-Herbert, the author, known at that date as "Wyvern," has returned to this country; and still devoting his leisure to the improvement of culinary art, has written various interesting and useful small works, *e.g.* "Fifty Breakfasts," "Fifty Lunches," "Fifty Dinners," and "Fifty Suppers." But his chief and most complete volume, entitled "Common Sense Cookery for English Households," pp. 504, 1894: E. Arnold, London, is admirably adapted for heads of families, as well as to cooks of the present day who take interest in their duties and desire to improve.

rendering it more easily digested, which may be briefly described here. I refer to the use of a good mincing machine for the purpose of producing very fine divisions of the muscular fibres. I do not so much refer to its employment for serving afresh the remains of food which have been already cooked, as for its preparation of fresh meat with a special object in view. For the former, in order to produce mince-meat, or material for rissoles, etc., the process is, of course, extremely useful. I refer rather to the value of this treatment of fresh meat, where sufficient mastication is difficult, owing to imperfect teeth or tender gums, or where habitual mastication is neglected, or when time cannot really be bestowed on it. The human stomach being adapted almost solely for the digestion of flesh, and not at all for that of vegetable and farinaceous matters, which are chiefly digested in the first intestine beyond the stomach, it is of the highest importance that animal fibre, whether of butcher's meat, game, or poultry, should be minutely divided by a prolonged mechanical action of the teeth before it is subjected to the chemical process, that is, digestion by the gastric juice which takes place in the stomach. Accordingly, if we are able to introduce into that organ, say, the flesh of rump-steak or mutton chop (which especially when fresh, as in hot weather, is by no means tender),

Mincing:

useful for ordinary purposes,

also for a special product;

for fresh meat when teeth are imperfect.

in a state of minute division, the process of digestion is rendered far easier and the nutritious elements are assimilated much sooner than if they are imperfectly masticated. Thus also a considerable expenditure of nervous energy on the digestive process is saved for other purposes, and after the meal heaviness or undue fulness is rarely experienced.

To facilitate digestion.

A pound of rump-steak, free from all fat and skin, or an equal quantity of the best mutton steak, should suffice for a lunch for three persons. Treat it as follows: First, broil it over a clear fire, only about half as much as you would do for serving it as a broiled steak, not more, so that it will be quite red throughout, although not raw when cut. Slice the meat into small strips, removing as you do so any portion of fat or skin-like matter met with, which is not to be used. The mincer having been carefully rinsed with hot water, pass the strips through it three times consecutively, which ought to yield a soft, thoroughly divided mass. Put this into a Bain-marie, with about half or three-quarters of a pint of cold stock, free from fat, with a little salt and pepper, and mix thoroughly with a wooden spoon. Place the vessel on the corner of the fire, gradually bringing the water below to a boil, stirring all the time until the red tint has almost disappeared, which will probably be in about seven or ten minutes. It should now be a perfectly smooth *purée*, and should be served quite hot. An excellent

Directions for using the machine.

accompaniment is a little *macaroni au jus* (see p. 162), with some bread thoroughly toasted through, so as to be brittle, as all toast ought to be. Some cold toast spread with butter may follow, in order to furnish the fatty element and render the light meal complete.

I can conceive no better means of supporting at midday, after a long morning's work, an exhausted system, when it is really impossible to devote an hour to rest and the ordinary lunch. Midday rest, however, should be the invariable rule both before and after that meal, and then it would still be hard to find a better form of repast than this now indicated.*

Invaluable for midday meal for business men.

Passing rapidly on without naming the ordinary and well-known service of cold meats, fresh and preserved, poultry and game, open or under paste, in some form, to be found in profusion on table or sideboard, and in which this country is unrivalled, a hint or two relating to some lighter cold *entrées* may be suggested. It is scarcely possible to treat these apart from the salad which, admirable by itself, also forms the natural garnish for cold dishes. A simple aspic jelly, little more than the *consommé* of yesterday, first diluted, then flavoured with a little lemon peel and tarragon vinegar, furnishes another form of

Variations.

Garnish for cold dishes.

* The best form of mincer I have seen claims, I believe, to be an American design, and is known as the "Enterprise." The agency is 86, Dale Street, Liverpool. It is inexpensive, and is sent post free anywhere.

garnish, or a basis in which to present choice morsels in tempting forms, such as poultry livers, ox-palates, quenelles, fillets of game, chicken, wild fowl or fish, prawns, plover's eggs, etc., associated with a well-made salad. On this system an enterprising cook can furnish many changes of light but excellent nutritious dishes, for summer breakfasts and lunches, as well as for dinner.

Aspic jelly.

Aspic jelly, however, is now so popular, and deservedly so, that a special receipt, to which personal trials and consideration have been given under my own eye, as in all such offered in the text, is here presented as a ready way of preparing it. For this purpose a good beef extract is particularly useful and efficient. Hence it is quite unnecessary to make now, as formerly, a clear meat stock with much labour for this purpose; especially when, as in hot weather, it will not keep well, and prolonged stove heat should not be employed unnecessarily. At very short notice a capital aspic can be prepared as follows: Slice a large carrot or turnip, a small head of celery, adding two cloves, pepper and salt, a bay leaf, a small bunch of sweet herbs; all to be put into a saucepan with three pints of water, and allowed to simmer for two hours until reduced to two pints. Pour off through a strainer and let stand until cold. When required, add two ounces of gelatine in hot summer weather (one and a half ounce suffices when it is cool) to a pint of the

Author's receipt.

cold liquor, and let it stand two hours. Then heat the remaining pint to boiling point, and add to the pint which contains the gelatine, together with a thin paring of lemon peel, two teaspoonfuls of lemon juice, the same of mild vinegar, and one or two teaspoonfuls of tarragon vinegar. Then pour in two or three whites of eggs, lightly beaten, and stir well to fine the liquor. Bring the whole just up to the boiling point; then at once remove and keep on the hot plate close by, but not boiling, for three minutes only. Take it off and set it aside for three minutes longer, and then strain through flannel. It is now quite hot and clear; stir in at once a large teaspoonful of the meat extract, and set aside to cool until wanted.

Salads.

On salad so much has been written, that one might suppose, as of many other culinary productions, that to make a good one was the result of some difficult and complicated process, instead of being simple and easy to a degree. The materials must be secured fresh, are not to be too numerous and diverse, must be well washed with very little handling, and all water removed as far as possible. It may be made by the hostess, or by some member of the family, sufficiently interested to regard the process as an exercise of fine art, immediately before the meal, and be kept cool until wanted. Not many servants can be trusted to execute the simple details involved in cross-cutting the lettuce, endive, or what not, but two or three

Instructions for salad-making.

How to dress a salad.

times in a roomy salad bowl; mixing one salt-spoonful of salt and half that quantity of pepper in a tablespoon, which is to be filled three times consecutively with the best fresh olive oil, stirring each briskly until the condiments have been thoroughly mixed, and at the same time distributed over the salad. This is next to be tossed thoroughly but lightly, until every portion glistens, scattering meantime a little finely chopped fresh tarragon and chervil, with a few atoms of chives over the whole, so that sparkling green particles spot, as with a pattern, every portion of the leafy surface. Lastly, but only immediately before serving, one small tablespoonful of mild French or, better still, Italian red wine-vinegar is to be sprinkled over all, followed by another tossing of the salad.* The uncooked tomato, itself the prince of salads, may be sliced and similarly treated for separate service, or added to the former, equally for taste and appearance. A tomato, however, should never be cut—it may have been previously trimmed a little—until the moment it is wanted for eating, as the juice and pulp of a ripe fruit drain away, and leave only its cellular framework, if it has been divided an hour beforehand. The skin should be removed in the manner described at p. 160. Cold boiled asparagus served with a *mayonnaise* forms a dish of its kind not to be surpassed. At present ranking, when the quality is fine, as an

Additions.

Cold asparagus.

* A salad for five or six persons is supposed.

expensive luxury, there is no reason why, with the improved methods of cultivating this delicious and wholesome vegetable, it should not be produced in great abundance, and for less than half its present price.* As to the manifold green stuffs which, changing with the season, may be presented as salad, their name is legion; and their choice must be left to the eater's judgment, fancy, and digestion, all of which of course vary greatly.

A favourite combination is that of uncooked celery cut in rings, with small slices or strips of cooked beet. This should be always served on small plates, one sufficing for each person's consumption. Kidney potatoes and beet sliced, well sprinkled with parsley and chervil, and a few atoms of tarragon, finely cut, is another; slices of celeriac (boiled) may be added. An agreeable salad, striking to the eye, when cost is a matter of indifference, may be made with slices of kidney potato and fine black truffles of equal size; or of slices of celeriac and truffles mixed, immediately before serving, with a well-made *remoulade* sauce. *Remoulade* is a *mayonnaise*, into which one or two hard-boiled yolks of eggs and a little mustard have been smoothly incorporated by rubbing in the powdered yolk little by little during the making of

Celery and beet.

Potato celeriac with truffles, etc.

"Salad-dressing," or "Remoulade."

* On asparagus, and also on salad culture, see "The Parks and Gardens of Paris," by W. Robinson, F.L.S., pp. 468 *et seq.* Second Edition. Macmillan.

the sauce in the usual way. A Japanese vegetable, *Stachys tuberosa*, each small tuber cut in two, raw or boiled for five minutes, mixed with small discs of boiled beet and slices of raw celery, is a novelty.*

"Stachys tuberosa," etc.

But there is another form of salad which is always available, and welcome, too, in any season of the year, viz. the salad of cold boiled table vegetables. An excellent basis may be made of cooked French beans, dressed as directed in the previous paragraph; for this purpose those preserved in tins may be used. Greatly inferior as these are when served hot to the fresh *haricot verts*, they are very acceptable as salad in winter and early spring. The preserved green haricots (*flageolets*), similarly treated and added in equal proportion, with a garnish of sliced carrot, beet-root, or tomato, may be arranged not only as a most savoury and wholesome, but even as an elegant dish. Cold boiled potatoes,† carrots, turnips, broad

Various other salads.

Additions.

* The author is credited with having introduced the above-named vegetable into this country from Japan (*Gardener's Chronicle*, Jan. 7, 1888), and believes he was the first to grow it here, from some tubers which were sent him. It is very easy to cultivate, very hardy, is not injured by frost, and, once planted, maintains its place like a Jerusalem artichoke. As a vegetable for the table, it should be boiled from fifteen to twenty minutes in salt and water, and eaten with a simple white sauce, *à la poulette*, for example. Now, 1898, seen in the shops as "Japanese Artichokes."

† The best variety of potato for the purpose is that known as *Vitelotte;* but in any case a kidney potato should be employed, if the variety named is not obtainable.

beans, peas, cauliflower, and other greens, may all be employed thus: combined and garnished according to the maker's taste, which there is abundant opportunity for displaying. Salads also may be varied and made more substantial by the addition of small fillets of sole or trout, or the flavour may be heightened, if desired, by morsels of haddock, sardine, etc. Well known and appreciated as the *Salade de légumes* * always is at a Paris restaurant, most persons here would prefer the vegetables simply sliced, so as to preserve some of their natural form and texture, rather than cut into innumerable small cubes, as usually presented. In all cases, such salad should be kept very cool, and be dressed immediately before serving in warm weather.

* SALAD OF COOKED VEGETABLES.

The French salad of cold cooked vegetables, *Salade de légumes*, is made as follows :—

Take 4 ozs. of carrots cut in squares of about a quarter of an inch ; 3 ozs. of turnips cut in the same way ; 4 ozs. of small green asparagus cut in pieces ; 4 ozs. of peas ; 4 ozs. of French beans cut in squares like the turnips and carrots. Boil each of these vegetables separately in about a quart of water, with a teaspoonful of salt ; when cooked strain them on a cloth ; let them cool, and then place the French beans at the bottom of a salad bowl. Arrange the other vegetables in little heaps around, first the carrots, then the peas, then the turnips, then the asparagus, so as to alternate the colours, and so on again. The rest of the peas and asparagus may be placed in the centre, and sprinkled with a spoonful of chopped *ravigote* (fresh tarragon, chervil, parsley, and chives). Serve with oil and vinegar apart.

CHAPTER IX.

Fish, and its value as food—The various constituents of flesh, of wheaten bread, and of fish compared—Analytic table, showing the same—Fish is desirable food for many persons—Ought to be less costly than it is—Varieties of fish, and their distinctive characters as food—Some contain large proportion of fat—The conger and the sturgeon—Preparation of fish for the table—Value of head, bones, and fins for sauce making—Fish sauces—Salmon in perfection—Crimping of ditto—Mode of cooking it—Baking of fish—Roasting and broiling—Boiling and steaming—Fish soups and stews, excellent—Receipts—*Bouillabaisse*—A working man's stew.

BEFORE dealing practically with the cookery of fish, it is desirable to compare its value as a nutritive material with that which is supplied by other important types of food.

Amount of water to solids in human body,

First, let us take as a starting-point a fact relating to the structure of the human body, the adequate nourishment of which is the chief aim to be accomplished by the digestion of the varied matters which we eat and drink. Many persons are surprised to learn that from two-thirds to three-quarters of the body, judging by weight, consist of water; and this proportion is

the same, or nearly so, in all the land animals which are consumed by man for his own support.

Thus, in every hundred pounds' weight of healthy flesh, not artificially fattened, whether beef, mutton, or poultry, and from which the bone has been removed, about seventy-five to seventy-eight pounds of water are present, and are separated as such from the solid matter of the meat in the process of cooking and digestion. Twenty-five pounds, or a little less, that is to say, not quite a fourth of the whole, alone are solid, and alone contain nutritive material. Speaking roughly, these twenty-five pounds are constituted as follows:—

and in butcher's meat and poultry.

About sixteen or seventeen pounds consist of the essential elements of the flesh or muscle, and of the solid part of the blood, which afford the important nitrogenous constituents of food, the "proteids," or "flesh-formers," but not including another nitrogenous compound known as "gelatine," which forms the principle of a less important group (see p. 22).

Solids composed of albuminoids,

Of this gelatine, with some allied compounds, about one to two pounds are present; but although nitrogenous compounds, they are distinct from the preceding class of flesh-formers, and possess less nutritive value as food.

gelatine,

Of fatty matters, about two to four pounds may be reckoned.

fat.

The remainder consists of what are known as

"extractives," and of various saline and even metallic matters, all of which are essential parts of the animal body.

Extractives and salts.

It is necessary to observe that when meat is unduly fattened, as very often happens, the above proportions are greatly altered. When the meat is fat pork, for example, reared for bacon making, etc., or beef which is fed in order to secure a prize for size and weight, the products are very different, containing largely fat, with less albumen and fibrin, and much less water; and the pig owes his existence in great measure to the facility with which he produces fat meat for human food, such fat being of special value to use in combination with other foods, the potato, for example, which contain almost none of it.

Meats with superfluous fat.

We will next examine another great food staple, a typical example from the vegetable kingdom, because familiar to all and extensively used, viz. fresh wheaten bread. In one hundred parts of this, about thirty-five to forty are water, fifty are starch, about eight consist of the nitrogenous principle corresponding to the proteids or flesh-forming elements in flesh, and there is but a fraction of fatty matter, the remainder being salts, etc. See p. 44 for the exact analysis.

Water and solids in bread.

Now let us compare with these the constituent elements of fish. There is a closer resemblance, at first sight, perhaps, than many would expect to find. Notwithstanding that the fish is an inhabitant of

water, and cannot live out of it, the proportion of that element in the animal's structure exceeds only by a small amount the proportion which is present in land animals. In other words, the solid constituents of fish as a class, and there are important exceptions here and there, are but little less in weight than those of land animals already described.

Water and solids in fish.

In one hundred pounds of fish without bone, from seventy-five to eighty-five are water, or rather more than three-quarters of the whole; leaving, say, about twenty pounds of solids as a mean estimate. Of these, about twelve to eighteen pounds are nitrogenous compounds. The most important, or flesh-forming principle, is less in quantity than in meat, and there is a rather larger proportion of gelatine. The proportion of fat varies greatly. The saline matters are pretty constant, and moderate in quantity.

The comparison can be more easily made by means of the following table :—

ANALYSIS IN GENERAL TERMS OF THE COMPOSITION OF THE FLESH OF A HEALTHY LAND ANIMAL NOT ARTIFICIALLY FATTENED, AND OMITTING THE BONES.

Table of compositions already described.

In 100 parts.		
About . .	75 to 78 are water.	
Leaving . .	22 „ 25 of solids.	
Of these solids—		
About . .	16 or 17 are proteids or flesh-forming material.	Nitrogenous compounds.
„ . .	1 to 2 „ gelatine.	Nitrogenous compounds.
„ . .	2 „ 4 „ fat.	
Remainder—"Extractives" and salts.		

ANALYSIS OF WHEATEN BREAD.

In 100 parts.

About . . 35 to 40 are water.
„ . . 50 „ carbo-hydrates, starch.
„ . . 8 „ proteids.
Remainder—A trace of fat with salts.

ANALYSIS OF WHITE FISH WITHOUT BONE (SOLES, WHITING, TURBOT, ETC.).

About . . 75 to 85 are water.
„ . . 20 „ solids.

Of these solids—

About . . 12 to 18 { are partly proteids, with a rather large proportion of gelatine. } Nitrogenous compounds.

Remainder—A little fat with salts.

In some fish, where the fat is large in quantity (herring, mackerel, salmon, etc.), the water is correspondingly diminished.

It should be stated that this estimate has been based solely on the leading and most important facts afforded by a chemical analysis, without reference to other considerations of minor importance referred to below.*

* It is well known that there are some restorative qualities contained in animal flesh, which, although not at present fully appreciated by chemical analysis, have a value of no mean order, demonstrated chiefly by empirical observation. The invigorating effect of a small quantity of beef-tea, in a person suffering from inanition, may be cited in illustration; the solid matter resulting from its evaporation being insignificant in quantity when compared with the support afforded. Now, the product obtained by dealing with fish, in the same manner as we treat beef in order to obtain "beef-tea," is greatly inferior

We may now arrive at an approximative estimate of the place which fish occupies as nutrient material among the other products which the animal kingdom offer to men. Fish is inferior to flesh, not in the quality, but in the quantity of certain constituents, viz. the proteids, or flesh-formers, of which it contains fully a third less than ordinary meat. It contains more gelatine, which, although a nitrogenous product, is much inferior to "albumen," and can only partially

Value of fish as compared with that of meat.

in this restorative quality, although the solids present are larger in quantity in "fish-tea" than in that of meat, being chiefly gelatine.

I have had the following experiments performed in the most accurate manner, which will show in part the nature of the chemical difference:—

One pound of rump-steak, one pound of turbot, each without skin and bone, the former freed from fat, were thus separately treated. The flesh was passed twice through a mincing-machine, and sufficient cold water to cover (one pint) was added. After standing one hour, the mass was heated to boiling point, and allowed to simmer ten minutes, then strained through calico, and the contents of the strainer washed with water: a little floating fat was removed (in the case of the beef). Each of the liquids was evaporated on a water bath to the consistence of a soft extract.

Beef-product.

Weight of extract, 276 grains or 3·94 per cent.
Of this product, 5 per cent. was gelatine.

Fish-product.

Weight of extract, 396 grains or 5·6 per cent.
Of this product the gelatine amounted to 21·8 per cent.

replace a portion of this latter in the animal economy, while the "extractives" are less valuable than the extractives of meat. As a rule, fat is almost absent; in certain varieties it is abundant. Fish is an aliment well adapted for persons whose physical labour is not considerable; but the deficient elements can be easily supplied from other sources, as we shall see hereafter. The popular estimate of the value of fish as an article of nutritious diet rates it, I think, below its value; and it deserves to be more largely consumed than it is. At the same time it must be admitted that the high price which the finest sorts obtain make them costly forms of food, so that they must, by a large proportion of the community, be regarded as articles of luxury for occasional and not for frequent use.

Excellent food for many.

I may further remark that the list of fish in general demand by the public is a restricted one. The force of habit, together with the entire absence of interest or curiosity on the part of our countrymen in relation to diet, has led to a conventional usage, limiting greatly and disadvantageously the variety of fish which would otherwise arrive at the market. Sole, whiting, haddock, herring, mackerel, cod, salmon, turbot, brill, trout, smelt, and red mullet, form a group to which a large proportion of British households in purchasing fresh fish as a rule strictly limit their orders. Again, at almost every hotel, coffee-

Few varieties used as food;

room, or public restaurant here, and whatever the hour of day, it is rare indeed if the waiter summoned to an applicant demanding fish does not first suggest the inevitable fried sole, whatever else he may have to offer ; and it is generally accepted as probably the safest order to give, and the most likely to be promptly executed. No desire for variety in material or in cookery is manifested, for if the host suggested something less familiarly known, a troublesome doubt as to his motive would probably be aroused in the mind of the guest.

due to habit.

Relative to the list of fish just given, it may be remarked that the whiting, the smelt, and the sole are the most delicate in flavour, and the easiest of digestion ; fitting them admirably to the invalid commencing after illness to make a trial of solid food ; the two former being little less nutritious than the sole, which is, moreover, susceptible of very varied treatment in high-class cooking for the production of elegant *cntrées.* The turbot, rightly esteemed, is stronger food, and agrees well with most persons. The cod, for some, is not quite so readily taken ; and is not only more palatable, but is sometimes more easily assimilated when "crimped." The same may be said of the salmon, a leading characteristic of which is the presence of fat. This element in fish is more apt to disagree with the stomach than fat from some other sources ; and on this account it is that many either avoid, or eat sparingly of salmon.

The easiest of digestion and most delicate;

the most substantial.

Oil in fish.

As the fat is chiefly found in the underside of the fish, a slice from the back only should be taken by such persons; but it may be taken as generally true that in the freshly killed fish the fat is more wholesome than on the second or third day after leaving the water, when it becomes oily and acquires a slight characteristic taste and odour.

The mackerel is another oily fish, and it disagrees with some persons accordingly; so is the red mullet, but the oil is chiefly in the liver, and gives the fish its peculiar flavour and value. The herring tribe abound in oil, as we shall see hereafter.

Another list of fish which well deserves attention is headed by the dory, a fish of the second rank, with a peculiar firm, short, flakey, and very white flesh, and not perhaps sufficiently appreciated.

Fish less esteemed, but excellent food.

The plaice, the skate (usually crimped), lemon-sole, grey mullet, haddock, fresh herring, and the flounder follow, all excellent food, and wanting only proper treatment in the kitchen to make them very palatable; while in nutritive qualities some of them rank as high as the sole and whiting. Then the herring-tribe, viz. the pilchard, and smaller varieties of the family, by reason of their abundance, the facility with which they are preserved, and of the large proportion of fat which they contain, furnish a supply of useful food for the working man.

But besides all these there are fish, which may be

placed if not in the first, yet certainly in the second rank, many of which are practically unknown to ninety-nine out of every hundred London housekeepers. First may be named the wolf-fish, or cat-fish, which, although unlike in appearance to the usual occupants of a fishmonger's shop, is a white fish of excellent quality. It lives almost entirely on crustacea, a circumstance, as Yarrell long ago pointed out, always associated with excellence in the fish so fed. The superiority of the cod caught at the Dogger Bank is said to be partly due to the same cause, as their food at this spot is largely crustacean. The halibut, from the North Sea, closely related to the turbot, is good and substantial food, and when large, as it often is, is also very cheap. The sea-bream, not unlike a large fresh-water perch, and the basse, which has been sometimes styled a white salmon, are both useful varieties which have never received the attention they deserve, and which may be presented simply yet effectively at table. The gurnard is much better known, and an excellent dish may be made with it. Among cheap fish, which might be obtained in any quantity and at a small price, are the ling and hake, related closely to the cod, but chiefly used at present as salted fish and exported; the thornback, of the same family as the skate, and equal in quality; the pollack, a substantial whiting, and the coal-fish, of the same family, but second in order of quality, are both good when

Fish of the second class,

but excellent in quality,

not sufficiently known.

in season; a proviso which, it is to be remembered, applies equally to every variety.

Congers and the eel family.

I shall but enumerate the conger—excellent for soup and stew making; the whole tribe of eels with their abounding fatty constituents, larger even than those of the herring family; and the sturgeon with a fibre approaching in quality nearer to that of meat than any other fish; besides all the fresh-water fish, such as pike, tench, perch, etc., of which the supply is, by comparison with sea fish, limited; following on which there is still a large number of minor fish which it would be tedious to particularize.

Fresh-water fish.

Preparation of fish for the table.

The fish for the day's consumption having been selected, a remark or two may be made on its preparation for the table. This commences in the hands of the fishmonger, as soon as it has become the property of the purchaser. Before entering into his possession, the fish has to undergo the process technically known as "cleaning." This differs considerably according to the fish to be dealt with, but in all cases it involves the loss of what is often a valuable portion of nutritive matter. The gills, liver, intestines, etc., are first removed, often some skin, then portions of the fins, sometimes the head also. The best of these are known as "cuttings," and are sold at a low price to the poor, at the close of the day, many of

"Cleaning" by the fishmonger.

whom thoroughly appreciate their value and profit thereby.

To illustrate the result of this process for the purchaser, let us see what happens in one instance, as an example, perhaps a somewhat extreme one, but nevertheless occurring many times daily in every fishmonger's shop. A pair of soles is bought and ordered to be sent home in fillets: eight fillets accordingly arrive. The soles were first skinned, the internal parts taken out, after which a long fillet, consisting of all the flesh on either side of the central bone, both front and back, was removed, making four from each fish. The whole skeleton, with the head, fins, and tail, forming a single entire piece, remains as "cuttings" in the shop. Now this piece will be found just equal to the fillets in weight, constituting in fact one-half of the fish; and it will make excellent stock for fish-soup, a form of food greatly neglected in this country. For in utilizing fish, as far as possible, and in circumstances where a strict economy must be regarded, the soft parts of almost any fish may be cooked apart, so that the skeleton, head, and fins may be utilized for a fish-stock, or to make the foundation of the sauce intended to accompany the fish when served. It may be unnecessary to say that these parts are useless for that purpose when already cooked, as by boiling, frying, etc.

An illustration of what this means.

A sole "cleaned" is half wasted.

As a general observation, it may be said that in

preparing fish for the table by the cook, sufficient trouble is rarely taken to remove some portion of the bones; this can be advantageously done by a clever hand, without disfiguring or injuring the fish. Sauces should be appropriately served; for example, the fat sauces, as *hollandaise*, and other forms of melted butter, are an appropriate complement of hot boiled fish, while *mayonnaise* is similarly related to cold. These and their variations, which are numerous, may also accompany both broiled and fried fish; but the latter are often more wholesome and agreeable when served with only a squeeze of lemon juice, and a few grains of the zest, if approved, when a fresh green lemon is not to be had—and it rarely can be here. But the juice of the mushroom is preferred, in the form of catchup, and no doubt justly, by some, for the grill. Endless variations and additions may be made according to taste on these principles. But there is another no less important principle, already referred to, viz. that the fish itself often furnishes a sauce from its own juices, better and more appropriate than some of the complicated and not very digestible mixtures prepared by the cook. Thus "melted butter"—which is regarded as essentially an English sauce—when intended to accompany fish, should not be, as it almost invariably is, a carelessly made compound of butter, flour, and water; but in place of the last-named

The cook's duty.

Sauces,

for fried and broiled fish.

Fish should partly furnish its own sauce.

ingredient there should be a concentrated liquor made from the trimmings of the fish itself, with the addition of a few drops of lemon juice, and strengthened, if necessary, from other sources, as from shell-fish of some kind. Thus an everyday sauce of wholesome and agreeable quality is easily made; and this principle finds its highest illustration in that admirable dish, the sole, with *sauce au vin blanc* of the French, or, as associated with shell-fish, in the *sole à la normande.** This is well served in Paris, of course, but it can be found in perfection on the coast of France, especially in the south, due in part probably to the abundant garnish of shell-fish, which are found in finer condition and fresher there, while

Shell-fish as garnish.

Illustrations.

* A leading review, in a friendly notice of the above when it first appeared, spoke of a "mistake" made by me in "imagining a *sole en matelote normande* to be a simpler dish than it really is." I certainly intended the sentence in which it is named, and which is reprinted above without change, to signify my high respect for this finished dish, and if I have not made this clear, I hereby desire to do so. It was named to show that the principle of employing the juices of fish, and especially of shell-fish, as a sauce, finds its *highest expression* in the *sole à la normande*. Turning to my copy of Jules Gouffé's classical work, pp. 621–22 of the original edition, Paris, 1867, I see that he remarks specially thereupon, "La recette que j'indique n'a pour base comme on a pu constater, que l'essence de poisson," precisely warranting what I had stated. It is understood, of course, that these juices are combined with a good *velouté* to make the sauce, and that it may be garnished further to any extent, according to the luxury demanded by the guest, or for the entertainment.

the sole bears transit and keeps well, for it does not inhabit the southern waters.

Some fish furnish their own sauce in a still simpler manner, of which an illustration no less striking is at hand in the easiest, but perhaps best mode of cooking a red mullet, viz. baking it, and securing the gravy of delicious flavour, which issues abundantly from the fish, chiefly from the liver, as its only sauce.

Paris far from sea-coast.

Paris suffers in the matter of fish by distance from the seaboard. London has a far fresher supply. No Frenchman knows what salmon is until he tastes, sometimes with much astonishment, a Severn or Christchurch fish, taken from the water in the morning, crimped on arrival in London in the afternoon, such as our leading fishmongers can supply during all the spring and summer in time for dinner. It is one of the few things which we are able to offer our neighbours without fear of rivalry. A Parisian cannot obtain a salmon until the very delicate oil of the fish, by reason of the lapse of time, say sixteen to twenty-four hours after having been killed, has acquired a certain flavour, which is in fact the result of commencing decomposition. That flavour is for him, and for all those who cannot obtain a salmon freshly killed, the natural and inherent flavour of the fish. Such persons are surprised to find that this distinctive characteristic is wholly absent in the fresh fish. The fine nutty flavour of the latter, and

Really fresh salmon not possible there, for reasons given.

the crisp brittle quality of the flakes which the flesh offers after crimping, are wholly unknown wherever the salmon has to be carried by a transit exceeding in length a duration of twenty-four hours.

Perhaps I ought to add, lest a doubt should exist in the mind of any one, that crimping thus done, that is, eight hours after removal from the water, inflicts no pain whatever on the fish; were it otherwise I would not sanction it for any consideration whatever. To cook crimped salmon in perfection, a slice should be plunged into an ample saucepan of *boiling* salted water, and allowed to boil six or seven minutes only. The quantity of water in the fish-kettle should of course be sufficient in relation to the salmon put therein, not to cease boiling in consequence; and on removing the slices when the time is up, they should not be exposed more than is necessary even to the action of the steam arising from the kettle. This may appear almost an unnecessary refinement: I can vouch for the fact that exposure to the current of steam for a few seconds lessens materially the crispness of the crimped fish.

Crimping of salmon inflicts no pain.

Closely related to the baking of fish is another mode of cooking it, which is applicable to nearly every variety, and which has the advantage of retaining all the nutritive material, while the juices and the characteristic flavour are preserved in a manner not attained by any other process. It is rarely practised, because any other

Roasting of fish

than those conventional methods which have been universally employed in cookery are slowly adopted by the public, until attention has been thoroughly aroused on the subject. Nevertheless, the method I am about to advocate is widely applicable, and well deserves at least to rank among the other and better known modes of preparing fish. It consists in placing the fish, after the usual cleaning, entire, if of moderate size, say from a sole to a small turbot or dory, in a block tin, aluminium, or pure nickel dish, adapted to the form and size of the fish, but a little deeper than the thickness of it, so as to retain all the juices, which by exposure to the heat will flow out. First, however, the surface of the fish is to be lightly spread with butter, and a morsel or two added round it; the whole is then to be placed in a Dutch or American oven, in front of a clear fire.* The advantages of this method are, that the fish is cooked entirely in its own juices, which are abundant, and form the best sauce, and that these juices which contain part of the nutriment and much of the characteristic

before the fire;

juices not to evaporate,

serving for basting and for sauce.

Nutriment not wasted;

* Mr. W. Burton, some time ago of Oxford Street, made for me an oven and dishes expressly for the purpose of cooking fish before the fire. The oven is a modification of that known as the "American," being rather deeper, from before backwards, and much shallower, from above downwards, on account of the flat form of fish not occupying the space which is required by joints of meat.

flavour are saved and utilized; lastly, the direct action of the fire browning the surface of the fish, gives that appetizing flavour which is the especial charm of the "roast" and the "grill," and which has been frequently referred to in this volume as "tasting of the fire." In fact, the proper term for denoting the method described is that of "roasting," for the fish is literally roasted before the fire, and basted in its own gravy; and with the same advantage in result as that which roasted meat possesses by universal consent over that which is baked in an oven. It is necessary to guard against over-roasting so as to dry the fish and evaporate the gravy; and if through carelessness this condition has been reached, the fish should be moistened by the addition of a little light stock before serving; and this is always done on the dish in which the cooking has taken place. The method is susceptible of innumerable variations to accommodate different tastes. Portions of fish prepared as fillets may be treated as well as entire fish; garnishes of all kinds, as shell-fish, etc., may be added, flavouring also with fine herbs and condiments, according to taste. I may add that the process may be conducted in a properly ventilated oven where a clear fire is really not to be had, producing a result nearly, although not quite, equal to true roasting; or the dish may be first placed in the oven, and be finished before the fire, which is

flavour retained.

Applicability of process to many kinds.

Baking, with care, gives good results.

better. Cooked, however, as first described, such a dish may be welcome at any table; in preparing red mullet, for example, as just referred to, it is inimitable; while a fresh haddock or a dory, stuffed or not, take higher rank by being thus treated. But the working man also can thus advantageously cook before his kitchen fire, in a common Dutch oven, some fillets of plaice or skate with a slice or two of bacon; the dish to be filled or garnished with some previously boiled haricots; and by this means he may secure an economical and most savoury meal, which is at the same time nutritious. This is but a single illustration among many which might be adduced, of what may be done by this simple method for those whose resources are of the slenderest kind.

Boiling fish, a wasteful process.

Having regard to this question of economy and preserving the juices of the fish, it should never be forgotten that by boiling it in any manner considerable waste of nutritive material occurs. Relative to this subject, I have made numerous experiments, and find that the loss in weight by boiling varies with different fish, and also with the mode of operating. It is rarely as low as five per cent., it is generally much more, and I have known it to reach thirty per cent., the water in which the fish has been boiled containing of course a certain amount of lost solid animal matter. In order to avoid waste as much as possible, the fish should be placed in absolutely boiling water, which should contain a good proportion of salt. The liquor

in which the fish has thus been cooked, I have evaporated, and have obtained from it, *in solid deposit*, no less than four per cent. of the original weight of the fish; a considerable quantity, constituting it, in fact, a fish broth. There is no doubt, then, that steaming is a far more economical process than boiling, and ought to be substituted for the latter when fish is to be cooked by heated water only. See description of that method at pp. 105, 106.

Steaming preferable.

To return to the utilization of the commoner kinds of fish, and of fish trimmings or cuttings, in the composition of stock. From such materials may be made a soup, or better still, a stew of fish, in very savoury and nutritious form, for the economical purchaser; or a delicate and attractive dish may be presented for an experienced palate. I may offer as an example of the former a receipt from Gouffé, for making a good *consommé* of fish only, without any meat, and therefore a soup *maigre*.

Fish soups, etc.

A French receipt.

Put into a large frying-pan, with about three-quarters of a pound of butter, five large carrots, four onions, three heads of celery, four shalots; all the foregoing to be cut in slices. One head of garlic (better omitted here), three cloves, two bay leaves, one sprig of thyme, twelve sprigs of parsley. Lightly fry them till they acquire a reddish colour. Add a bottle of dry Sauterne, and eight pints of water; boil, skim, and then add one ounce and a half of salt, and two

pinches of mignonette pepper. Put in a stewpan six or seven pounds of gurnets cut into pieces; next add the bones of six whiting, keeping the fillets for clarifying. Let it simmer for two hours on the side of the fire. When it is finished, strain through a cloth. Pound the fillets of whiting with two whites of eggs; clarify the *consommé* of fish with the whites of egg and fillets of whiting. The vegetables must be sufficiently fried to give the *consommé* a light tint (*Op. cit.*, p. 348).

An English receipt.

The next, a simpler receipt, can be recommended, after numerous trials, as an excellent family fish soup.

Fish soup.

Put three ounces of butter into a stewpan; add two carrots sliced; one onion and a shalot, in thin slices; then cloves, a little thyme, and some parsley. Fry them gently until of a reddish tint; then add three or four pints of cold water. Let it boil, skimming occasionally. Then add a small fresh haddock, bones and all, cut up into pieces, and the head and bones of three whitings, setting aside the fillets. A cod's head, or that of a turbot, or the fresh bones, head, and fins of two large soles, the fillets of which are required for another dish, may take the place of the foregoing, or be cut in pieces and added thereto, according to the quantity required. Add some salt and a little pepper. Let all simmer together for two hours gently, at the corner of the fire; take out the bones and pass all the rest through a coarse strainer. Divide the fillets of whiting into

two or three small portions each, boil for a few minutes in some of the stock, add a little fresh green chervil and parsley chopped, not too finely, and serve all together in a tureen.

If the soup is preferred somewhat thicker in body than this receipt produces, let it be made so by adding some farinaceous matter in small quantity, as *crème du riz*, or, if preferred, a tablespoonful of white *roux* (that is, a little flour well mixed with butter in a stewpan over the fire, cooked but not allowed to brown); either addition is undoubtedly an improvement. **To thicken it.**

It is, in my opinion, undesirable to clarify fish soups; if other garnish is desired, *quenelles* of whiting may be substituted for the fillets; and some of them may have a little coral (spawn of the lobster) added to furnish flavour and colour. A further change may be made by adding fillets of other fish, or a few shell-fish, and a few small balls of seasoning, similar to that used for veal and poultry. **To garnish it.**

To make a *bouillabaisse* in the Marseillaise fashion,* take three or four pounds of fish, whiting, sole, small haddock, red mullet, and, following the instructions given strictly throughout, a very small conger eel or a portion of one. All these are to be cleaned, cut in slices, and their bones removed; two dozen of mussels to be added. The receipt in question is as follows :— **Marseilles receipt for bouillabaisse.**

* Referred to at p. 146.

Put into a stewpan two onions sliced, two tomatoes peeled, a carrot sliced; then, in a coarse net bag, the following: two bay leaves, two slices of lemon, half the zest of a Seville orange, two cloves, a little thyme, several sprigs of parsley, a clove of garlic, two red capsicums cut, and a little saffron; add salt and pepper, and a little pimento. Place the pieces of fish over these, pour in six tablespoonfuls of olive oil; add three pints of water, with two or three glasses of white French wine; cover, and let all boil well together for half an hour. The whiting, however, should be put in only a quarter of an hour before finishing. Serve the whole in a soup tureen with slices of toasted bread apart; or place them in the tureen before filling.

The following receipt is offered for an economical dish, or fish stew, suitable for a working man's family:—

Working man's fish stew.

Take three or four pounds of hake, ling, skate, or haddock, and a pound of "cuttings or trimmings," which are the best part of the fish for stock making. Remove all the fish from the bones, break up or pound the latter, and set aside with any portion of head there may be, and the cuttings. Put into a saucepan, over the fire, two ounces of lard and two or three onions sliced, and let them fry until brown; then add two quarts of water and all the pounded bones and trimmings, some parsley or other green herbs, pepper and salt. Let the whole simmer for three hours,

adding the amount of water lost by evaporation. Strain out the bones, bits of skin, etc., add the fish in pieces, and boil gently ten or fifteen minutes. Thicken with sufficient flour mixed smoothly with a small portion of stock, and added before finishing. In order to make the dish complete and substantial, a few small suet dumplings should be well boiled and put into the tureen.

CHAPTER X.

Milk, an example of a natural "complete" food—That of the cow is its type—Its use as food almost universal—Essentially an animal food—Most important that it should be pure and uncontaminated—Being very susceptible of injury, in distribution and otherwise, and thus becomes a fertile source of disease—Many epidemics of fever, etc., caused by the milk trade—Tuberculous milk—Analysis, and nutritive value—Milk essentially food for the young growing animal—Whey—Koumiss—Strict sanitary measures employed to ensure the purity and wholesomeness of milk—Prudence requires it to be generally regarded as a raw product, to be taken only after boiling, especially by travellers abroad.

THE term "complete," as we have seen in the fourth chapter, is employed to denote that the food so designated contains all the elements necessary to the support of the body, and to the activity of its functions. Most commonly, such nourishment is a compound of two or more animal or vegetable substances, combined in order to afford the various elements necessary to meet all the demands of animal life. But there is a notable example of a single animal product, perhaps the best which can be offered as a complete food; one prepared by nature, furnished in great abundance, and which we

Milk is the type of a "complete" food provided by nature.

are all well acquainted with, namely, milk. It is a product which slightly varies in different species of the mammalian family. That form which we are most familiar with is the milk of the cow, and it may be taken as the type. It constitutes so large and so valuable a part of the food of man in temperate climates, that some account of it is desirable here, particularly as the subject is rapidly growing in interest and importance, and as the popular knowledge respecting it is very imperfect.

I have said that the subject of milk is growing in importance; this is true on the following grounds. First, because it is essential to the well-being of young children to have milk which is produced of excellent quality at its source; and secondly, it is equally necessary that it should not be adulterated, or otherwise injured in the processes of transit and distribution. Meantime, as our population grows more dense, sources of contamination increase, and the task of obtaining an absolutely pure supply is more difficult. Very much more is contained in these simple statements than is at first discerned by the popular eye.

Exceedingly important to ensure a pure supply,

Before making further comments thereupon, let us recall the fact that, excepting only the article of wheaten bread, milk is perhaps the most universally employed food in this country. And I am not quite sure that the exception made above is correctly stated to be so. Every man, woman, and child in the kingdom,

because every one is a daily consumer.

with few exceptions, consumes milk in some form at least once or twice daily; while for the youngest part of the community, during the most critical stage of early growth, milk forms the chief and the best source of nourishment. Now it is to be remembered in connection with these striking facts, that milk is a complex animal food, and one which so rapidly decomposes, that in hot weather a few hours suffice to injure it materially. Moreover, it is extremely liable to contamination if exposed to impure atmospheric influences, etc. But the most serious danger connected with milk as food is associated with the vast daily process of distribution necessary in order to convey the product from the cow to the consumer. No doubt that water is wilfully added in some small quantity to a large proportion of the supply in order to cheapen it; but where this is not done, all the vessels employed in dairy operations are more or less carefully and completely washed twice a day. It is this contact with water, employed by no means always, as it ought to be, at the boiling point, which constitutes the milk trade a ready and unceasing agency for the spread of three or four forms of disease among the population. It is only within the last few years that we have become aware that one of the principal channels by which typhoid fever, scarlet fever, and diphtheria are propagated, is the agency which conveys the daily milk

It decomposes rapidly,

and is very liable to become tainted;

to transmit the germs of disease,

from the cow to every house in the kingdom. Water which contains some admixture of sewage matter is liable to become contaminated by the excreta of persons suffering from infectious disease; and thus, in its very employment for cleansing milk vessels, the seeds of disease may be deposited in a single milk can, from which twenty families, say, are supplied. It is foolish, or worse, to ignore the presence of this and similar sources of danger to the community, resulting from the rapid increase of population, or to affect that it is unwise to be sensitive concerning the presence of dangers to health in the daily routine of the household, seeing that their discovery and removal may render life there more enjoyable and secure.

by admixture with sewage matters.

Had such counsel been listened to by our forefathers, the mortality from fever might still be in this country what it was forty years ago; moreover, we know that the cause now in question, like every other cause of fever, is a removable one, if reasonable precautions are taken. It was greatly due to the late Dr. Murchison, and to the late Mr. Ernest Hart, who more than any one studied this subject exhaustively, that the great epidemic of typhoid fever in the parish of Marylebone, in 1873, was traced to a single case at a country farm which supplied milk to a dairy in that parish; directly occasioning no less than two hundred and eighteen cases of fever among the customers of that dairy, of

Milk has largely disseminated typhoid.

A well-known illustration.

whom twenty-six died. From these a vast number of other cases arose, how many could never by any inquiry be correctly estimated.

During the succeeding ten years no less than eighty-one (separate) epidemics were similarly traced in various parts of this country to milk distribution.*

Tuberculous Milk.

There is another source of disease associated with the use of milk, besides the contamination described, arising from a constitutional malady to which the cow is subject, namely, tuberculosis. When this is present, the disease is liable to be communicated from a characteristic ulceration affecting the udder to the milk itself, rendering it highly dangerous to the consumer. So important is this fact, that I shall but quote the words of a high authority regarding the sole precaution which can render the consumer safe from infection, namely, "As regards milk, tuberculous infection is so readily destroyed by boiling that this ought to be done as a precautionary measure by every householder." † Let me add that for many years, in travelling, whether in

* See an admirable and very concise account of the subject in a paper read at a meeting of the Social Science Congress, at Huddersfield, October, 1883, by Mr. Ernest Hart, and entitled, "Is it desirable to take any, and what, further measures to prevent the spread of Zymotic Diseases through the Milk Supply of our Towns?" London: Smith, Elder & Co.

† "A System of Medicine," edited by J. Clifford Allbutt, M.A., M.D., etc. (Macmillan, 1897), vol. ii., article "Tuberculosis," by Sidney Martin, M.D., F.R.S., etc., Professor of Pathology in University College, London, etc.

this country or abroad, I never take raw milk, but invariably pursue the course recommended at p. 212.

The foregoing brief statements suffice to show the importance of the dairy and its products in connection with the subject of food, even when considered apart from the question of their dietetic value. I shall next proceed to describe the composition and characteristics of good milk, adding some remarks on its use as diet, and then indicate the practical mode in which those who are interested in obtaining it unadulterated and uncontaminated may obtain their object.

Composition of milk.

Of good cow's milk, nearly one seventh part by weight is solid matter, the remainder is water.

The solids.

Of this seventh part, rather more than a third is "lactose," or milk-sugar; rather less than a third is "casein," the basis of cheese; rather more than a fourth is "milk-fat," or cream; the small remainder being salts or mineral matter. The foregoing proportions are sufficiently correct for ordinary purposes, and are easily remembered. A more exact analysis is given here of the proportions in 100 parts of milk by weight.

Water		86·5
Solids—Milk-fat, or cream . .	3·9	
Casein, or albuminoid. .	4·2	
Milk-sugar, or lactose. .	4·6	
Salts	0·8	
	—	13·5
		100·0

Specific gravity.

The specific gravity is generally about 1030 to 1033, at 60° Fahr.; but specific gravity alone cannot be regarded as an exact test of quality, since the quantity of cream varies with different specimens; and as cream is of lighter specific gravity than milk, a specimen of the latter, which is extremely rich in cream, other ingredients being the same, will weigh lighter than one which is deficient in cream. But that a sample of milk exceptionally rich in cream should be offered for sale, although hypothetically possible, must be regarded as practically impossible in the last degree. The nutritive value of milk corresponds, of course, with the aggregate amount of all the solids contained, and for all purposes of the consumer, the specific gravity corresponds with that amount, the figure rising as the solids are augmented.

Consideration in relation to.

Amount of solids is the measure of value.

The specific gravity of unadulterated milk furnished by different healthy cows may be regarded as ranging between 1027 and 1035. But the mixed product of several such cows equals at least 1030 or 1031. If the milk furnished by any dealer is persistently below 1030, there is ground for complaint on the part of the customer; and I think it may be said that any metropolitan dairy of repute will furnish a uniform supply of milk decidedly above 1030. Nevertheless, there is a large quantity sold by the small dealers to the poor, of which the specific gravity is no more than 1025 or

1026. Nothing, however, is easier than to ascertain the real value of any sample which the purchaser desires to test. A lactometer may be bought for 2*s.* 6*d.*: it is only necessary to float it in a jug of milk, and the figure on its scale, which is level with the surface of the milk, is the specific gravity; the temperature should be about 60° Fahr.

Use of the lactometer.

Where an exact analysis is required, as, for example, to determine the question of fining a fraudulent dealer, the value of the sample has to be found, by ascertaining the amount of solids present, apart from the cream, and estimating the latter separately.

Amount of solids must determine the question of adulteration by water.

The Society of Public Analysts requires a minimum of "nine per cent. of solids, not fat;" and any sample which does not reach that amount has almost invariably been adulterated with water, and the seller of it is liable to a fine. But "nine per cent." is a low standard determined on to avoid the infliction of hardship on any small dealer who may have been supplied from the country with a genuine, though exceptionally poor milk, of which the solids did not exceed nine per cent.; and it may probably yet be altered. Hence, vast quantities of milk which are sold every day at that standard, contain a good deal of added water. The standard of the best metropolitan dairies, whose interest it is to supply unadulterated milk, is always higher.

Amount of solids necessary.

Milk is essentially the food of the growing animal. Supplied by nature for the rapid development of the young calf, it is, with a little modification, admirably adapted for our young children. It is excellent food, too, for some adults; by no means for all. Those who take much exercise, or follow laborious occupations, may make it a useful portion of their dietary. It is rarely suitable for sedentary persons, or for those who have reached the latter stage of life when the powers diminish, and the habits become less active than heretofore. As a drink at meal time, it is for the most part undesirable; for liquids taken with solid food need not be nutritious, indeed, are better not to be so: they are rather required to dilute and dissolve the latter, nutritive material being for the most part abundantly supplied by the solid constituents of a meal.

Milk is the food of growing animals.

Not necessarily always suitable to the adult.

Milk forms a more suitable form of drink when the fat has been removed, when, in short, it has been skimmed. If the casein is also taken out, as in cheese-making, the whey, which now contains little besides the sugar and the salts, is a very wholesome beverage, when fresh. Milk may be fermented also, and an agreeable light effervescing drink results, known as Koumiss, and largely used in Russian Tartary, where it is made chiefly from the milk of the mare, which slightly differs from that of the cow. The latter, however, is now treated here in the same way, and

Whey.

Koumiss.

is in no respect inferior; it is widely recognized as useful in some chronic complaints, and has been more or less successful.

In order to ensure unadulterated and uncontaminated milk, it is necessary to adopt habitually certain precautions, or the probability of obtaining that which is impure at some time or another, during the long array of chances which life affords, is not inconsiderable. This fact makes it desirable that the milk trade should be subjected to official sanitary supervision. For the present the following hints for guidance may be useful :—

Precautions to ensure purity.

First. In country districts, where the consumer is commonly supplied direct from the farm, it should be ascertained that the dairy is completely detached from all the drains of the house and yards, and that the well used for dairy washing should be uncontaminated by sewage. It should be an absolute rule that all vessels are scalded once a day at least with boiling water.

Drainage at the dairy farm.

Dairy vessels and boiling water.

Secondly. When in such districts infectious disease occurs at the dairy farm, whether in the dwelling house or in the cowsheds, no milk should be distributed on any pretext, until the sources of infection have disappeared.

No milk to be used when infectious disease occurs at the dairy farm.

Thirdly. When doubt exists as to the source of milk, as during a fever epidemic, and no milk

absolutely beyond suspicion is to be had, it should be well boiled before it is used as food, by which process it is rendered safe. Some of those who have most studied the subject, are so impressed with its importance, and especially in relation to the interests of the family, as to advise that all milk should be thoroughly boiled before it is consumed. They believe that it is wise to regard milk as a raw food, and undesirable, on grounds above stated, for human consumption, until it has been cooked. Continental travellers will do well to take it in this form, and as it is always thus served for *café-au-lait* abroad, there is no difficulty in obtaining it at any time.

Milk obtained from doubtful sources to be boiled.

Fourthly. In all large towns and in the metropolis, milk should be obtained solely from some extensive organization of high repute, well known to have made it an absolute principle of its business to distribute milk solely from sources which are held under vigilant supervision by a competent person. Moreover, every can of milk received from the country for distribution should be examined for quality, before being delivered to the public. This is a mode of proceeding which is now thoroughly understood and practised, at least in London; and there is no real difficulty in adopting such precautions, as well as others not less important, as has been practically proved for several years, at least by one great institution, on a large scale, in this metropolis. For the present, it is incumbent on every

Obtain milk from distributors of high repute.

housekeeper who regards the health of his family, to exercise caution after the manner here indicated. At no distant period, all country dairies from whence milk is sent away for sale, as well as the public milk-shops held by dealers in towns, will, without doubt, be subject to official inspection, and be regulated by sanitary enactments. In the accomplishment of this ceaseless task of milk distribution, almost nothing can be done by any single individual to avert the dangers to which carelessness and misfortune expose him; while well-devised arrangements of the nature suggested may render him almost secure.

CHAPTER XI.

The combination of dishes to form a meal—Three typical systems of arranging daily meals—The French or Continental—The provincial (Great Britain)—That of town life (London)—Characteristics of each meal—Breakfast—Lunch—Dinner, of two kinds: the family meals, the dinner of invitation—The *rationale* of the initial soup—Plan of dishes to follow discussed—*Hors-d'œuvres*—More in vogue on the Continent than in this country—Most of all in Russia—As a dietetic habit, it is undesirable for reasons given.

THE art of combining dishes to form a meal now demands our consideration. The occupations of man in a civilized state, no less than the natural suggestions of his appetite, require stated and regular times for feeding. But the number of these set apart in the twenty-four hours differs considerably among different races, and also among different classes of society. It must suffice for us to consider the subject only so far as the limits of Europe are concerned. Taking a general view of this subject, it may be said that there are three principal systems to which all varieties of habit may be reduced. From an English point of view these may be regarded as—

Daily meals should be regular.

1. The French system of two chief meals a day; adopted by other Continental nations.

2. The system of provincial life (Great Britain) of four meals, with which the habits of Holland and Northern Germany are more or less analogous.

Number varies in different races.

Reducible to three chief systems.

3. The system of town life, of which London is the type, or three meals a day.

1. In the French system, the slight refreshment served in the early morning, in the form of coffee or chocolate, with a rusk or a roll of bread, does not amount to a meal. It is only a dish, and that a light one, and not a combination of dishes, which is then taken. At or about noon a substantial meal, the *déjeûner*, is served; and at six or seven o'clock, an ample dinner. Such is the two-meal system, and it appears to answer well throughout the West and South of Europe.

1. The French system.

2. What I have termed the provincial system consists of a substantial breakfast at eight or nine, a dinner at one or two, a light tea about five, and a supper at nine or ten. It is this which is popular throughout our own provincial districts, and also among middle-class society of our northern districts throughout both town and country. As already indicated, the usages of the Dutch and of their immediate neighbours on the sea-coast, as well as of the great German nation, correspond more to this than to the first-named system. The number of

2. English provincial system

resembles that of Germany.

meals may be regarded as the same, although not taken at the hours named above ; coffee, and not tea, being taken morning and afternoon.

3. That of London society.

3. The prevailing system of London, and of the numerous English families throughout the country, whose habits are formed from partial residence in town, or by more or less intimate acquaintance with town life, is that of three meals daily. In general terms the breakfast takes place between eight and ten, the lunch about two, the dinner from seven to half-past eight, or even later.

Breakfast and its characteristics.

In all cases each meal has its own specific character. Thus, in this country, breakfast is the most irregular in its service, and least of all demands general and intimate coherence of the party assembled. Individual interests concerned in the arrival of the letter-bag, in the morning news, in plans for the day, in cares of coming business, etc., are respected. Provision for acknowledged dietetic peculiarities on the part of individuals is not forgotten, punctual attendance at the hour named is not required, and every one comes or goes as he pleases.

Lunch.

At lunch the assembly is still somewhat uncertain. Thus some members of the family are absent without remark ; intimate friends may appear without special invitation ; while those less intimate can be asked with small ceremony. Occupations of pleasure or of business still press for

pursuit during the afternoon, and the meal for such may not be too substantial. It should suffice amply to support activity; it should never be so considerable as to impair it. Here may be just named an invention of comparatively recent date, afternoon tea, which, however, cannot be reckoned as a meal. In reality, a pleasant excuse to mark the hour for friendly gossip with a hostess "at home," it may be the occasion of undesirable habits, if enough solid food is eaten to impair digestion and "spoil" the coming dinner. Nothing can be more undesirable at this hour than sweet and rich cake, hot buttered toast or muffins; nevertheless they are frequently offered. But *à propos* of tea, many of us might with advantage avoid the sugar and the cream, which at this hour interfere with the stomach far more than does the infusion itself, and add in their place a delicate slice of lemon neither thicker nor larger than a half-crown, the flavour of which—fragrant peel and a hint of acid—combines with the aroma of good tea, without in the least disguising or flattening it as the conventional additions do. It would be almost as rational to add cream and sugar to wine, as to fine and delicately flavoured tea. Occasionally tea is served with lemon in this country, but it is mostly added in excess. A very slight shaving, which contains both peel and pulp, is ample for an ordinary cup.

Afternoon tea.

The last meal of the three, dinner, has characters wholly different from the preceding. The prime

occupations of the day are over; the guests are known and numbered; the sentiment is one of reunion after the dispersion of the day—of relaxation after its labours, sports, or other active pleasures. Whatever economy of time may have been necessary in relation to the foregoing meals, all trace of hurry should disappear at dinner. A like feeling makes the supper of the "provincial" system a similarly easy and enjoyable meal. And all this is equally true of dinner, whether it unites the family only, or brings an addition of guests. General conversation: the events and personal incidents of the day, the current topics of the hour, are discussed in a light spirit, such as is compatible with proper attention to the dishes provided. All that follows late dinner should for the most part be amusement—it may be at the theatre, an evening party, or a quiet evening at home. There should be ample time, however, for every coming engagement, and security for some intervening rest for digestion. Dinner, then, is the only meal which—as the greater includes the less—need be discussed in the third part of our subject, which claims to treat of custom and art in combining dishes to form a repast. With the requirements and under the circumstances just specified, it should not be a heavy meal, but it should be sufficing. No one after dinner should feel complete satiety or repletion, with a sense of repugnance at the idea of eating more; but all should still enjoy the

Dinner;

the most important,

to be discussed at length.

conviction that a good meal furnishes delightful and refreshing occupation.

Dinners are of two kinds—the ordinary meal of the family, and the dinner to which guests are invited. There is a third dinner in this country, of common—too common—occurrence, viz. the public dinner, which is essentially a British institution, and cannot be passed by in silence.

Dinners of two kinds.

The late dinner should never include children. It is a meal which is in every way unsuited to them; and they are quite unfitted to take part in its functions; besides, the four-meal system is better adapted to their requirements of growth and digestion in early life. A family dinner may usually consist of a soup, fish, a substantial and a light *entrée*, a roast and a sweet; the light *entrée* may even be omitted. If, however, the meal is required to be more substantial, a joint may be served in addition after the fish; but this should be very rarely necessary. A special dish of vegetables may be advantageously placed before or after the roast, according to circumstances; and supplementary vegetables should be always at hand. Cheese or a light savoury trifle may complete the *menu*.

The family dinner.

The *rationale* of the initial soup has often been discussed: some regard it as calculated to diminish digestive power, on the theory that so much fluid taken at first dilutes the gastric juices. But there appears to be no foundation for this belief: a clear soup, or the fluid

Why soup is the first dish.

constituents of a *purée*, disappear almost immediately after entering the stomach, being absorbed by the proper vessels, and in no way interfere with the gastric juice which is stored in its appropriate cells ready for action. The habit of commencing dinner with soup has without doubt its origin in the fact that aliment in this fluid form—in fact, ready digested—soon enters the blood and rapidly refreshes the hungry man, who, after a considerable fast and much activity, often sits down with a sense of exhaustion to commence his principal meal. In two or three minutes after taking a plate of good warm *consommé*, the feeling of exhaustion disappears, and irritability gives way to the gradually rising sense of good-fellowship with the circle. Some persons are accustomed to allay exhaustion by taking a glass of sherry before food—a gastronomic no less than a physiological blunder, since it overstimulates and tends to injure an empty stomach, while it depraves the palate. On the other hand, the soup introduces at once into the system a small instalment of ready-digested food, and saves the period of time which, in the absence of soup, must be spent by the stomach in deriving some portion of nutriment from solid aliment; and thus the organ of digestion itself is rapidly strengthened for its forthcoming duties.

Next, fish.

Few persons will be found to dispute the second place in order to fish, although this arrangement is in some quarters an open question: its discussion, however, can scarcely

be regarded as within the limit of our space. The third dish should consist of the chief meat, the joint, if desired; and this is undoubtedly the place for it, if a substantial meal is required. The chief nutritious supply being thus afforded to the system, more delicate dishes, eaten in smaller quantity, and esteemed for their special qualities of flavour, aroma, or texture, should follow in an order which makes one complementary of or introductory to the next. Such, for example, as an *entrée* of cutlets, poultry, or sweetbread, etc., well garnished, are appropriate, and by many will be found preferable. Next, the well-roasted bird—of game or poultry—accompanied or followed by salad; and after this, or, if preferred, before the roast, a dish of choice vegetables, worthy to be served alone; *e.g.* asparagus, seakale, early peas, globe artichokes, etc. Then one light simple sweet, for those who take it, and a slight savoury biscuit, a grilled mushroom or a morsel of cheese completes the repast. Such a meal contains within its limits all that can be desired for daily enjoyment and use. If well and liberally served, it is complete in every sense of the word. Dessert and its extent is a matter of individual taste; of wines, coffee, and liqueurs I shall speak hereafter.

The most substantial dish;

entrées;

the roast;

the "legume;"

sweet and savoury.

A word about *hors-d'œuvres*. It is well known that the custom exists to a very wide extent among

Continental nations of commencing either midday *déjeûner* or dinner by eating small portions of cold pickled fish, of raw vegetables, of highly flavoured sausage thinly sliced, etc., to serve, it is said, as a whet to appetite. This custom reaches its highest development in the *zakuska* of the Russian, which, consisting of numerous delicacies of the kind mentioned, is sometimes to be found occupying a table in an ante-room to be passed between the drawing-room and dining-room ; or, and more commonly, spread on the sideboard of the latter. The Russian eats a little from three or four dishes at least, and "qualifies" with a glass of strong grain spirit (*vodka*) or of some liqueur, before taking his place at the table. Among these savoury preliminaries may often be found caviare in its fresh state, grey, pearly, succulent, and delicate, of which most of the caviare found in this country is but as the shadow to the substance.

"Hors-d'œuvres;"

the "zakuska" of the Russians.

Caviare.

I have no hesitation in saying, after much consideration of the practice of thus commencing a meal, that there is no good warrant for it on the part of individuals endowed with fairly good appetite and digestion. For them, both pickled food and spirit are undesirable, at any rate, on an empty stomach. And if appetite and digestion are wanting, the stimulant of the *hors-d'œuvres* is not only unnatural but decidedly prejudicial. Rational means to regain

Remarks on "hors-d'œuvres;"

appetite are indicated in such circumstances. And the *hors-d'œuvres,* although frequent attempts, from sheer force of imitation, to transplant them here are made, happily do not, as far as I have observed, thrive on our soil. They have been introduced here chiefly, I think, because their presence being demanded by foreign gastronomic taste, is supposed to be therefore necessarily correct. But the active exercise and athletic habits of the Englishman, his activity of body and mind in commercial pursuits, all tend to bring him to the dinner-table wanting food rather than appetite, and in no mind to ask for "whets" to increase it. Among idle men, whose heavy lunch, liberally accompanied with wine and not followed by exercise, has barely disappeared from the stomach at the hour of dinner, a piquant prelude as stimulus of appetite is resorted to. Hence the original invention of *hors-d'œuvres;* and their appearance in a very much slighter and more delicate form than that which has been described, still to be observed in connection with the chief repasts of the Latin races. The one plate which heralds dinner, and is indigenous to our country, is also one of its own best products—the oyster. But this is scarcely a *hors-d'œuvre.* In itself a single service of exquisite quality, served with attendant graces of mild and delicate vinegar or lemon juice, brown bread and butter, and a glass of light chablis for those who take it, the half-dozen natives

their value or necessity often questionable.

Oysters.

occupying the hollow shells hold rank of a very different kind to that of the miscellaneous assortment of tit-bits alluded to. Oysters are, in fact, the first dish of dinner and not its precursor ; the preface, and not the needless and obtrusive advertisement. And this brings us to the dinner of invitation.

CHAPTER XII.

Dinners of invitation—Two kinds : small and select ; large but complete—The old pretentious style described—Scheme of a rational dinner-party—Priority in the service of various courses or dishes discussed—Dessert—The *quart d'heure* after dinner—Turtle and fish dinners—Curry—Sketch for a small dinner.

AND of this entertainment, the dinner of invitation, there are two very distinct kinds. First, there is the little dinner of six or eight guests, carefully selected for their own specific qualities, and combined with judgment to obtain a harmonious and successful result. The ingredients of a small party, like the ingredients of a dish, must be well chosen to make it "complete." Such are the first conditions to be attained in order to achieve the highest perfection in dining. Secondly, there is the dinner of society, which is necessarily large ; the number of guests varying from twelve to twenty-four.

Two distinct types of "dinners."

The small and select,

and the dinner of society, large.

The characteristics of the first dinner are—comfort, excellence, simplicity, and good taste. Those of the second are—the conventional standard of quality,

some profusion of supply, suitable display in ornament and service.

It must be admitted that, with the large circle of acquaintances so commonly regarded as essential to existence in modern life, large dinners only enable us to repay our dining debts, and exercise the hospitality which position demands. With a strong preference, then, for the little dinners, it must be admitted that the larger banquet is a necessary institution; and, therefore, we have only to consider now how to make the best of it.

Some drawbacks attaching to the large dinner;

No doubt the large dinner has greatly improved of late; but it has by no means universally arrived at perfection. Only a few years ago excellence in quality and good taste in cuisine were often sacrificed in the endeavour to make a profuse display. Hence, abundance without reason, and combinations without judgment, were found co-existing with complete indifference to comfort in the matters of draughts, ventilation, temperature, and consumption of time. Who among the diners-out who have passed middle age has not encountered in his early days an entertainment with some such programme as the following, one of an order which, it is to be hoped, is now quite extinct?

greatly improved of late.

What it used to be not long ago:

Eighteen or twenty guests enter a room adapted at most to a dinner of twelve. It is lighted with gas, the chief available space being occupied by

the table, surrounding which is a narrow lane, barely sufficing for the circulation of the servants. Directly—perhaps after oysters— appear turtle soups, thick and clear. A *consommé* is to be had on demand, but so unexpected a choice astonishes the servitor, who brings it after some delay, and cold: with it punch. Following, arrive the fish—salmon and turbot, one or both, smothered in thick lobster sauce: sherry. Four *entrées* promenade the circuit in single file, whereof the first was always oyster patties; after which came mutton or lamb cutlets, a *vol-au-vent*, etc.: hock and champagne. Three-quarters of an hour at least, perhaps an hour, having now elapsed, the saddle or haunch of mutton arrives, of which gentlemen who have patiently waited get satisfactory slices, and currant jelly, with cold vegetables or a heavy flabby salad. Then come boiled fowls and tongue, or a turkey with solid forcemeat; a slice of ham and so on, up to game, followed by hot substantial pudding, three or four other sweets, including an iced pudding; wines in variety, more or less appropriate; to be followed by a *pâté de foie gras*, more salad, biscuits and cheese. Again, two ices, and liqueurs. Then an array of decanters, and the first appearance of red wine; a prodigious dessert of all things in and out of season, and particularly those which are out of season, as being the more costly.

crowded; bad service;

vulgar profusion;

adjuncts cold;

too substantial;

indigestible;

interminable dessert and wine;

General circulation of waiters, handing each dish in turn to everybody, under a running fire of negatives, a ceremonial of ten or fifteen minutes' duration, to say the least. Circulation of decanters, general rustle of silks, disappearance of the ladies; and first change of seat, precisely two hours and a half after originally taking it. It may be hoped that a charming companion on either side has beguiled and shortened a term which otherwise must have been tedious. Now general closing up of men to host, and reassembling of decanters; age, quality, and vintage of wine discussed during consumption thereof. At last coffee, which is neither black nor hot. Joining the ladies; music by the daughters of the house; service of gunpowder tea, fatal to the coming night's rest if taken in a moment of forgetfulness; and carriages announced.

ladies leave, and more wine.

This brief sketch, which accurately portrays the dining procedure which prevailed during the forties and fifties of the present century, is retained here, as not without historical interest to the present generation.

Admitted that such an exhibition is impossible now in any reasonable English circle, it nevertheless corresponded too closely in style with that of the public dinner up to a later period—a state of things without excuse. And the large private dinner is often still too long, the *menu* too pretentious. Let me, however, be permitted to record, equally in

Enormous improvement in twenty years.

A lighter repast.

proof of growing taste and as grateful personal duty the vast improvement which has taken place. The dinner of society has, since the earlier editions of this work appeared, been greatly abridged in length and improved by the substitution of lighter and more delicate dishes for the solid meats of the last generation. At the same time, a *menu*, suitable for a large party, must be framed so as to offer various dishes for choice to meet the differing tastes of numerous guests, and it must therefore be more comprehensive than that supplied to a small one, say of eight or nine guests. Let us see how this is to be met. First, the soups: it is the custom to offer a *consommé*, which ought to be perfect in clearness, colour, and savour, always to be served perfectly hot; containing a few vegetables, etc., variously treated—doubtless the best commencement, as it is the key-note of the dinner; revealing also, as it does, nine times out of ten, the calibre of the cook to whose talent the guest is entrusted. But there is mostly an alternative of "white soup," and this is almost always a mistake. Many persons refuse it, and they are right, containing, as it generally does, a considerable proportion of cream—an injudicious beginning, when there is much variety to follow; excellent sometimes as one of three or four dishes, but dangerous otherwise to the guest who has not an exceptionally powerful digestion. But suppose that oysters, vinegar, and chablis have

Suggestions as to a modern dinner.

The soups.

Remarks on white soups.

just been swallowed! A brown *purée*, as of game, or one of green vegetable, less frequently met with, a "Saint Germain," for example, in early summer would be safer and more acceptable.

The fish.

Two fish, of course, should always be served; as, for instance, a slice of Severn or Christchurch salmon, just arrived from the water, for its own sake, and a fillet of white fish, for the sake of its sauce and garnish, which should be therefore perfect. The next dish is, in London, a question under discussion, viz. the question of precedence of an *entrée*, or of the *pièce de résistance*. The custom was to postpone the appearance of the latter until lighter dishes have been despatched or declined. If, however, the English joint is required at a meal already comprehensive in the matter of dishes, and taken at a late hour, it seems more reasonable to serve it next to the fish, when those who demand a slice of meat may be expected to have an appropriate appetite, which will certainly be impaired, equally by accepting the *entrées*, or fasting partially without them. But nothing so substantial as a joint is now required at a dinner of this kind; an *entrée* of meat, at all events, replaces it if wanted; at most, a little *tournedos* of the fillet of beef, or a *noisette* of mutton, daintily served. Then one or two light *entrées* follow, and these must necessarily be either in themselves peculiarly tempting morsels, or products of culinary skill, offering

"Pièce de résistance," when, if at all?

Lighter entrées follow.

inducement to the palate rather than to an appetite which is no longer keen: for example, a delicate *soufflé* of pheasant, leveret, or fowl garnished with truffles; while in summer these will naturally be more agreeably served as *chaudfroids*. Then the best roast possible in season or choice of two, and a salad; a first-rate vegetable, a slice of really fine ham, to some a most fitting accompaniment; two choice sweets, one of which may be iced; a parmesan *soufflé*, a herring-roe on toast, or a morsel of fine barely salted caviare, pale and pearly grey, which may be procured in two or three places at most in town, will complete the dinner. For dessert, which may be ushered in with a couple of companion ices of delicate texture, the finest fruits in season to gratify both eye and palate and for light amusement after; or simply nuts in variety, and dry biscuits; nothing between the two is tolerable, and little more than the latter is really wanted; and for decorative purposes the resources of flowers are now unbounded, to say nothing of autumnal tints for rich variety in season. But it may be admitted that the diminished number of sweet *entremets* strengthens the plea for a supply of delicious fruits, rendering the dessert useful and agreeable as well as ornamental.

The roast; sweets, savoury. Dessert.

And now that dessert is over, let me say that I do not admit the charge sometimes intimated, although delicately, by foreigners, of a too obvious proclivity

to self-indulgence on the part of Englishmen, in permitting the ladies to leave the table without escort to the drawing-room. The old custom of staying half an hour, or even an hour afterwards, to drink wine, which is doubtless a remnant of barbarism, has long been considered indefensible. The best wines the host can supply should appear in appropriate places in the course of dinner, and not be reserved, as formerly, until dessert appears. And after-dinner drinking should be simply a demand for a glass or so more of the '70 Port, or of the excellent "Mouton," or "Lafite;" or of that perfect "Pommery and Greno," "Moet," "St. Marceau," or "Perrier Jouet," * which have been known to repose this dozen years or more in some snug and quiet cellar of the back basement, where goodly stores still exist of the vintage of "'84." For the separation of the party into two portions for fifteen or twenty minutes is useful to both, and leads perhaps more completely to a general mixture of elements on reunion after than is attained by the return of the original pairs together. Whether this be so or not, the ladies have a short interval for the interchange of hearsays and ideas relative to matters chiefly concerning their special

Custom of ladies retiring.

Wine at dessert.

A short stay when ladies have left desirable.

* Let it be perfectly understood that these brands, undoubtedly choice as they are, are named without the slightest intention of selecting them for commendation beyond others, and merely as illustrating the arrangements suggested in the text.

interests; while the men enjoy that indispensable finish to a good dinner, an irreproachable cup of coffee and a cigarette; and the sooner these arrive the better, only let all the fine Bordeaux be finished before the perfume of Dubec or of Havana scents the air. With the small dinners of men it can scarcely too quickly follow the last service.

But marked by a special character are some dinners, which may be either small or large in relation to the number of guests, but which are necessarily limited as regards the variety of aliments served. I refer to dinners at which either turtle or fish predominates. In accordance with a principle already enunciated, a bowl of substantial stock, containing four or five broad flakes of the gelatinous product, often miscalled "fat," which is the chief representative of the turtle in the compound, is not a judicious prelude to a dinner arranged according to the orthodox programme, and offering the usual variety. A lover of turtle indulges freely in the soup both thick and clear, making it, in fact, an important instalment of his repast; and he desires, with or without some slight interlude, to meet the favourite food again in the form of an *entrée*. After so substantial a commencement, the dinner should be completed chiefly by poultry, and game if in season, and for the most part by dishes which are grilled or roasted

Special dinners.

Turtle in various forms,

and what should follow it.

in contrast to the succulent morsels which have preceded.

The fish dinner. The "fish dinner," as a speciality, also an occasional departure from daily routine, is acceptable, and gratifies the taste for that delicate and pleasant food in considerable variety. But if so indulged, very few dishes ought to appear subsequently. It is a curious fact that the traditional bacon and beans, which appear towards the close of a Greenwich whitebait dinner, should afford another illustration of undesigned compliance with the natural law referred to at the outset, the bacon furnishing complementary fat to supply its notable absence in fish.

Of the Greenwich type.

The curry. The enjoyment of a curry—and when skilfully made it is almost universally admitted to be one of the most attractive combinations which can be offered to the senses of taste and smell—is only possible at a limited repast. When freely eaten, very little is acceptable to the palate afterwards, exhausted as it is by the pervading fragrance of the spice and other adjuncts. Hence a curry should form the climax of a short series of dishes leading up to it, as an important element in a small dinner; or it may even be presented, in a miniature form, a *kari mignon*, as an elegant and acceptable final savoury morsel at the end of a dinner of pretension. But when presented, as it sometimes is, among the *entrées* of a first course, it is wholly out of place.

Here we may appropriately take a rapid glance at the characteristics of the feast where the guests are few in number.

Suggestions as to a small dinner.

The small dinner party should be seated at a round or oval table, large enough for personal comfort, small enough to admit of conversation in any direction without effort. The table should of course be furnished with taste, but is not to be encumbered with ornaments, floral or other, capable of obstructing sight and sound. A perfect *consommé*, a choice of two fish, a *tournedos* from the *filet*, *noisette* or *fricandeau*, followed by a *chaudfroid*, a *crême de volaille garnie*, a roast bird (game, wild duck, quail, plover, or snipe) and salad, a choice vegetable, and an iced *soufflé* or *charlotte;* and in summer a *macédoine* of fresh fruits in an old china family bowl, if there is one; and lastly, a savoury *croute*, accompanying vegetables, with crisp thin toast, and appropriate wines;—may be regarded as furnishing a scheme for such a party —or a theme of which the variations are endless.*

Eight dishes;

From seven or eight to nine or ten, but not more than nine or ten guests, can thus be brought into close contact; with a larger number the party is apt to form two coteries, one on each side of the host. The number is a good one also in relation to the commissariat department—eight persons being well supplied by an *entrée* in

eight guests.

* For an illustration of this, see a series of *menus* at the end of Chapter XIV.

one dish; while two dishes are necessary for ten or twelve persons. Moreover, one bottle of wine divides well in eight; if, therefore, the host desire to give with the roast one glass of particularly fine ripe Corton or Pomard, a single bottle is equal to the supply; and so with any other choice specimen of which a single circulation is required; and of course the rule holds equally if the circuit is to be repeated. Dinners of all sizes, up to the largest public dinners, are best provided for thus, in multiples of eight; calculations for food, wine, and service, are thus easily and accurately made and carried out in practice.

One bottle supplies eight.

And this leads us to the question—and an important one it is—of the wine; to be discussed in the next chapter.

CHAPTER XIII.

The question of wine with dinner—Remarks on the habitual use of alcoholic drinks of any kind—Wine should be taken chiefly during dinner, never before, not much, if any, after —Should be sound and pure, and without pretence—How to attain this—Relation of various wines with certain dishes —Cigarettes after dinner—Tobacco suggests coffee, and is incompatible with fine wine—The supply of water at dinner —Aërated waters—Foreign mineral waters—Their use at home and abroad—Sweet drinks at dinner objectionable.

I HAVE already said that, among all civilized nations, wine in some form has for centuries been highly appreciated as a gastronomic accompaniment to food. I do not, for an instant, attempt to deny it this position. Whether such employment of it is advantageous from a dietetic or physiological point of view as a rule of life, is at this moment altogether another question. I may not hesitate to say that, after a long and wide experience, I am still firmly convinced that the *habitual* use of wine, beer, or spirits is a physiological error, say, for nineteen persons out of twenty. In other words, the great majority of the human race, at any age or of either sex, will enjoy better

Wine taken with food from time immemorial.

Its habitual use not discussed here.

health, both of body and mind, and will live longer, without any alcoholic drinks whatever, than with habitual indulgence in their use, even although such use be what is popularly understood as quite moderate. But I do not aver that any particular harm results from the habit of now and then enjoying a glass of really fine pure wine—and, rare as this is, I do not think any other is worth consuming—just as one may occasionally enjoy a particularly choice dish; neither the one nor the other, perhaps, being sufficiently innocuous or digestible for frequent, much less for habitual use. Then I am disposed to admit that there are some persons—in the aggregate not a few—who may take small quantities of genuine light wine or beer with very little appreciable injury. For these persons such drinks may be put in the category of luxuries permissible within certain limits or conditions, and of such luxuries let tobacco-smoking be regarded as another example. No one probably is any better for tobacco, although if indulged in with moderation, it has, for many, a delightfully soothing and tranquillizing effect after the endless harassing and worrying incidents of a stirring life. Some indulge too freely, diminishing both their mental and digestive powers; while others find it absolutely poisonous, and cannot inhale even a small quantity of the smoke without instantly feeling sick or ill. And some few indulge

Occasional indulgence.

Some take wine with less injury than others.

The effects of tobacco vary as the individual.

the moderate use of tobacco all their lives without any evil effects, at all events, that are perceptible to themselves or to others.

Relative to these matters, every man ought to deal carefully and faithfully with himself, watching rigorously the effects of the smallest license on his mental and bodily states, and boldly denying himself the use of a luxurious habit if he finds undoubted sign of harm arising therefrom. And he must perform the difficult task with a profound conviction that his judgment is very prone to bias on the side of indulgence, since the luxurious habit is so agreeable, and to refrain therefrom, in relation to himself and to the present opinion of society, so difficult. Be it remarked, however, that the opinion of society is notably and rapidly changing relative to the point in question.

Each man should judge honestly for himself.

Having premised thus much as to what is absolutely best, I will now deal, in the spirit of compromise, with things as they are; and let it be understood that it is in this sense that I deal with the subject. I have only now to say, first, that wine, in relation to dinner, should be served during the repast; it should never be taken, in any form or under any circumstances, before, that is, on an empty stomach, and also is not desirable after the meal is finished. Regarded from a gastronomic point of view alone, nothing should appear afterwards except a small glass of cognac and coffee. The post-prandial habit of drinking

Never take wine or spirit before meals.

glass after glass even of the finest growths of the Gironde, or of the most mature or mellow shipments from Oporto, is doubtless a pleasant, but, in the end, for many persons a costly indulgence.

Wine should be the genuine produce of the grape,

Secondly, whatever wine is given should be the most sound and unsophisticated of its kind which can be procured. The host had far better produce only a bottle or two of sound *bourgeois* wine from Bordeaux—and most excellent wine may be found under such a denomination—with no pretence of a meretricious title, or other worthless finery about it, from a list of fictitious blends with pretentious labels supplied by an advertising cheap wine house. I could only speak in terms of contempt and disgust, did I not feel pity for the deluded victims, of the unscrupulous use of the time-honoured and historical titles which advertisers shamelessly flaunt on bottles of worthless compounds by means of showy labels, in lists and pamphlets of portentous length, and by placards sown broadcast through the country. So that one may buy "Lafite" or "Margaux"—"Chambertin" or "Nuits"—or even "'70 Port"—at a village store! No terms can be too strong to characterize such trade.

and be honestly characterized.

How to possess fine wines.

If fine wines of unquestionable character and vintage are to be produced, there are only two ways of possessing them: one, by finding some wine-merchant of long standing and reputation, who will do an applicant

the favour to furnish them, and the price must be large for quality and age. We may be certain that such a one will never advertise; no man who really has the *grands vins* of esteemed vintages in his cellar need spend a shilling in advertisements, for he confers a favour on his customer by parting with such stock. But better and more satisfactory is it to obtain from time to time a piece or two of wine, of high character and reputed vintage, when they are to be had, just fit to bottle, and lay them down for years until ripe for use. Commencing thus in early life, a man's cellar becomes in twenty or thirty years a possession of interest and value, and he can always produce, at his little dinners, for those who can appreciate it, something curiously fine, and free, at all events, from the deleterious qualities of new and fictitious wines.

Usual order of wines at dinner.

Briefly, the rule, by general gastronomic consent, for those who indulge in the luxury of wine, is to offer a glass of light pale sherry or dry Sauterne after soup; a delicate Rhine wine or Moselle after fish; a glass of good Bordeaux with the joint of mutton; the same, or champagne—dry, but with some true vinous character in it, and not the tasteless spirit and water which not long since enjoyed an evanescent popularity as absolute *brut*—during the *entrées;* the best red wine in the cellar, Bordeaux or Burgundy, with the grouse or other roast game; and—but this ought to suffice, even for that exceptional individual

who is supposed to be little, if at all, injured by "moderate" potations. With the ice or dessert, a glass of full-flavoured but matured champagne, or a liqueur, may be served; but at this point dietetic admonitions are out of place, and we have already sacrificed to luxury. But it is not to be forgotten that both temperance and digestion are favoured by the habit of avoiding much mixing of red and white, or indeed of any wines at our meals. Men have discovered for themselves that choice dry champagne, although of high character, developed by seven to ten years, or sometimes longer residence in bottle, and the finest growth of Bordeaux matured to perfection, however delightful each may prove itself in passing over the palate, often quarrel sadly when they arrive in the stomach below. Hence the somewhat modern, and certainly prudent course, which many now follow, viz. to drink either the one or the other wine throughout the dinner, and to limit one's self to that only. And this makes it necessary to supply, as before intimated, the best produce of the cellar during the whole course of the dinner, instead of reserving it, as in days of yore, for consumption afterwards.

One wine during a meal.

The value of a cigarette at the moment a meal has been completed, consists in the fact that after the first whiff or two of its fragrance the palate soon ceases to demand either food or wine. After smoke the power to appreciate good wine is lost, and no judicious host cares to open a

Tobacco after eating:

fresh bottle from his best bin for the smoker, nor will the former be blamed by any man for a disinclination to do so. Moreover, tobacco is unquestionably an ally of temperance; certainly it is so in the estimation of the gourmet. A relationship for him of the most perfect order is that which subsists between coffee and fragrant smoke. While wine and tobacco are antipathetic, the one affecting injuriously all that is grateful in the other, the aroma of coffee "marries" perfectly with the perfume of the finest leaf. Among the Mussulmans this relationship is recognized to the fullest extent; and also throughout the Continent the use of coffee, which is almost symbolical of temperate habits, is intimately associated with the cigarette or cigar. Only by the uncultured classes of Great Britain and of other northern nations, who appear to possess the most insensitive palates in Europe, have smoke and alcoholic drinks been closely associated. By such, tobacco and spirit have been sought chiefly as drugs, and are taken mainly for their effects on the nervous system—the easy but disastrous means of becoming stupid, besotted, or drunk. People of cultivated tastes, on the other hand, select their tobacco or their wines, not for their qualities as drugs, but for those subtler attributes of flavour and perfume, which exist often in inverse proportion to the injurious narcotic ingredients; which latter are as much as possible

an ally of temperance:

its relation to coffee,

natural, and widely recognized.

avoided, or are accepted chiefly for the sake of the former.

Before quitting the subject of dining it must be said that, after all, those who drink water with that meal probably enjoy the pleasure of eating more than those who drink wine. They have generally better appetite and digestion, and they certainly preserve an appreciative palate longer than the wine-drinker. Water is so important an element to them, that they are not indifferent to its quality and source. As for the large class which cannot help itself in this matter, the importance of an ample supply of uncontaminated water cannot be overrated. The quality of that furnished to the population of London is happily now good, but the only mode of storing it possible to many often renders it dangerous to health. Disease and intemperance are largely produced by neglect in relation to these two matters. It would be invidious, perhaps, to say what particular question of home or foreign politics could be spared, that Parliament might discuss a matter of such pressing urgency as a pure water supply; or to specify what particular part of our enormous expenditure, compulsory and voluntary, might be better employed than at present, by placing a constant and ample supply of it within easy reach of the poorest consumer in town and country. But for those who can afford to buy bottled waters, no purer exists in any

Water at meals.

The London supply.

Purest natural waters, plain and aërated.

natural sources than that of our own Malvern springs, and these are aërated and provided in the form of soda and potash waters of unexceptionable quality.

Aërated distilled water.

Pure distilled water, however, re-supplied with atmospheric air by a special process, and then well charged with carbonic acid gas, is now furnished at so reasonable a cost in London as to be within the reach of persons of moderate means. It is almost needless to say that so prepared, water is absolutely pure, and nothing more safe or wholesome can be employed for drinking purposes. Certainly it is wholly unnecessary to import waters for the use of the table from foreign sources, unless medical qualities are particularly desired by the consumer. No foreign waters of any kind whatever, from any source, are so pure or half so cheap, or so easy to obtain as the distilled waters now referred to, which are prepared here at home at our very doors; and none are so safe and so useful for the consumer in relation to health, whatever the advertiser may affirm respecting their value in gout, etc.

Soda and potash waters.

Then the great makers of soda and potash waters in this country supply a thoroughly trustworthy article. Each bottle contains a known quantity, from five to fifteen grains of the salt, the water being obtained from their own artesian wells, or other equally pure sources, so that English aërated waters are unrivalled in excellence. On the other hand, the foreign *siphon*,

made, as it often is, at any chemist's shop, and from the water of the nearest source, is a very uncertain production. Probably our travelling fellow-countrymen owe their attacks of fever more to drinking water contaminated by sewage matter than to the malarious influences which pervade certain districts of southern Europe. The only water safe for the continental traveller to drink is a natural mineral table water, and such is now always procurable throughout Europe, except in very remote or unfrequented places.* In the latter circumstances no admixture of wine or spirit counteracts the poison in tainted water, and makes it safe to drink, as people often delight to believe; but the simple process of boiling it renders it perfectly harmless; and this result is readily attained in any locality by making weak tea to be taken hot or cold; in the latter case, it is more palatable, with a little lemon infused, than alone; or in making toast-water, barley-water, lemonade, etc. The table waters now so largely imported into this country from Germany and France, contain a considerable proportion of mineral matter in solution,

Travellers catch fever by drinking bad water.

Adding wine makes it no safer.

Boil it

* Throughout France, St. Galmier; in Germany, Seltzers or Appollinaris; in Austria and Bohemia, Gieshübel, are always obtainable, being the table waters of most repute, in each case respectively, of the country itself. In all chief places in Italy, Appollinaris, Seltzers, or St. Galmier, are supplied by the hotels. In Spain these are rarely at present to be had, but the alternatives recommended are easily obtained.

and while they are wholesome as regards freedom from organic impurities, are, of course, less perfect for daily use than absolutely pure waters, such as those above referred to. Useful as they are for the English when travelling abroad, because the ordinary water supplied in foreign cities is so frequently contaminated, they are all far inferior to our home-prepared aërated, distilled waters for all purposes of consumption. Vaunted frequently as possessing certain medicinal properties, this very fact ought to prohibit their constant use as dietetic agents, inasmuch as we do not require drugs as diet, but only as occasional correctives, which can be added to pure water (for example, fifteen or twenty grains of bicarbonate of soda or potash) when required. Among them the principal are natural Seltzers, Appollinaris, and St. Galmier—of this latter some sources are inferior to others, the best appearing now to be chiefly retained for Paris—being perhaps among the most satisfactory within our reach. A dash of lemon juice, and a thin cutting of the peel, form sometimes an agreeable addition, especially to our well-made soda, seltzer, or potash waters; and nothing keeps the palate cleaner or in better order for appreciating food. I am compelled to say that the sweet compounds and fruity juices which not very long ago were produced, and inordinately puffed, as dinner drinks, and apparently in competition with wine, are rarely

or drink natural mineral water.

Waters with lemon juice,

but none with sugar fit for dinner drink.

wholesome adjuncts to a dinner. Such liquids rapidly develop indigestible acid products in the stomachs of many persons; while for all, the sipping of sweet fluids, effervescing or otherwise, during a meal tends to diminish appetite, as well as the faculty of appreciating good cookery. If wine is refused, let the drink which accompanies dinner be of pure water—with a sparkle of gas in it, and a slight dash of vegetable acid in it if you will—but in obedience both to gastronomic and dietetic laws, let it be free from sugar. No doubt there are exceptional circumstances in which fruity juices, if not very sweet, can be taken freely. Thus I have rarely quaffed more delicious liquor at dinner in the warm autumn of southern Europe, notably in Spain, than that afforded by ample slices of a water-melon, which fill the mouth with cool fragrant liquid; so slight is the amount of solid matter, that it only just serves to contain the abundant delicate juices of the fruit grown in those climates. Here some saccharine matter is present, but it exists in very small proportion, and in its most digestible form.

The water-melon at meals in hot countries.

CHAPTER XIV.

In order to arrange a dinner some practical acquaintance with food is necessary—Also of the season at which various kinds are in perfection—The art of *menu* writing—The scheme or elementary outline of a dinner—*Menus* should be written in French—Examples of simple *menus* for each month in the year—Some in English, chiefly in French, for comparison—*Menus* of higher character—Further remarks on the order in which dishes should be presented—And on other matters arising out of the subject.

Alleged difficulty in composing a menu.

THE remark is frequently heard from the domestic head of an English family, the lady of the house—who, although in easy circumstances and much occupied in good society, does not care to delegate her authority to a skilled professional housekeeper—that nothing puzzles her more than the composition of *menus* for the inevitable dinner parties. She feels almost as ready, or rather as unready, as she would be if called upon to compose a sonnet or a symphony. Her husband, whose counsels are so valuable, or at all events are so promptly furnished on almost all other topics, utterly fails in his attempt to offer a suggestion now. Hence she meets her cook on terms which

preclude exercise of choice or criticism; and the latter becomes mainly the author of the programme. But a leading confectioner or dinner purveyor may also be consulted, who supplies the suggestion desired, sending in a dish or two in consequence; and a suitable congruity is devoutly hoped for as the result. At all events, one may be assured that the *menu* will be sufficiently comprehensive; and there is even a probability that it will contain the latest novelty—well, let us say—in gastronomic nomenclature; since that of the imported dish itself may, perhaps, not be so easily or truthfully affirmed.

Practical hints on the "art of menu writing."

I venture, then, to offer a few hints relative to that particular form of literary composition which is involved in the so-called art of *menu* writing. Were it not that the art is really a very simple one, I should not risk the responsibility of offering advice. But it is necessary at the outset to state, that in order to insure success in this particular department of letters, some little knowledge of the subject, namely, food, its nature and principal forms, is really necessary.

Must know the foods in season

First, then, the author of a *menu* must have a moderate acquaintance with the varied materials which form the natural produce of any given season throughout the year. Otherwise, we may meet with a proposal to serve Scotch salmon at Christmas, wild duck at Easter, oysters and grouse at Midsummer, asparagus at Michaelmas, and tender peas in November. I

don't say that it is absolutely impossible to procure some of these things, more especially as the electric light may ultimately render us, for gardening purposes—and who knows for what else!—independent of sun and season; but at present most of those delicacies, like others which might be mentioned, are, at the periods named, practically unattainable. To be serious, it is necessary that a housekeeper should know what are the best products of the season, both of the animal and the vegetable world, in every month of the year. A pleasant stroll through Covent Garden once a week, and an occasional call on the fishmonger and poultryman, with frequent reference to some good manual of cookery, containing a kind of *Almanach des Gourmands*, will furnish a fair acquaintance with what is really an interesting branch of knowledge. See table of fish in season, Appendix, p. 293.

throughout the year.

Next, it is necessary to have a simple but clear notion of the foundation or outline, the pattern or "archetype"—if I may use a scientific term of rather lofty significance—on which every dinner, however great or however small, must be planned, as the groundwork of its construction. Certain primary elements are essential to the structure of a dinner; shorn of these there may without doubt be a meal, and indeed not a bad one of some kind; but there can be no dinner. Thus, a man may satisfy his

Every dinner should be arranged on a certain plan.

hunger with a large plate of meat, piled with supplementary vegetables, and flanked by the attendant bread, and greatly enjoy his meal, but this is not dinner in any technical sense of the word, and cannot be so regarded; it is simply a plate of meat and vegetables. It offers no change in form, or kind, or flavour, and no slight interval of rest for the palate; it is a single movement, not a complete symphony—an "andante" in common time, but wanting the preliminary introduction, and without the bright and sparkling "minuet" to follow, which in its turn leads to the "grand finale;" while this in its course may present a plaintive minor passage, giving force and splendour to the resumption of the major key before the close. Thus it is that certain constituent parts are necessary, one lending force to another by help of relief or contrast; the attainment of perfection through variety being as essential to the idea of a dinner as to that of a complete musical composition. Bearing this law in view, and maintaining the characters demanded, we may produce a dinner of Spartan simplicity, or may swell it to proportions which should satisfy a Lucullus; but the design or archetype is still to be discernible throughout.

A series of dishes, each having some relation to the next, so as to make an agreeable whole.

A dinner to be complete within moderate limits should contain, in ideal terms—

A complete dinner scheme

1. An introductory or preliminary dish or two, as soup, or fish, or both.

2. A substantial dish of meat, or *pièce de résistance*, to satisfy a keen appetite. } Exchangeable for the following if desired :

3. A choice dish or two of delicate flavour for those who have little appetite for the preceding (or No. 2), as well as for those who have, but are able also to reserve a place for the gratification of taste. } Not absolutely essential ; or may take the place of the substantial dish.

4. A dish of marked flavour and character easily digestible, inviting to the palate ; either a roast or grill.

5. A dish of choice vegetables by itself, with or without an attractive specimen of smoked or cured flesh in some form.

6. A sweet.

7. A savoury dish. } *Not all absolutely essential.*

Let the foregoing ideas be represented in a concrete form, either as simple, and applicable to one or two persons ; or with additions of a luxurious kind, for the purpose of providing the variety necessary when there are several guests. It may be laid down as a self-evident axiom, that while two persons agreeing in their tastes may dine well on three, four or at most five dishes, a larger number or choice of dishes must be provided to meet the differing tastes of ten or twelve persons, not one of whom individually may require more than the former. Thus— **which may be varied in detail according to circumstances,**

1. INTRODUCTORY OR PRELIMINARY DISHES.	Soup or Fish.	Soup and Fish.	Soups and Choice of fish.

2. SUBSTANTIAL DISH —*relevé* or *remove.*	Joint or other portion of meat; tender and juicy; not necessarily roast: to be well garnished, and attended with simply cooked vegetables.	
3. CHOICE DISHES; *entrées.*	An *entrée* of some kind; one of fish may come here if soup only were taken before the meat.	Two *entrées*—rarely more—simple or luxurious, according to the entertainment desired.
4. SAVOURY ENTREMETS. Here should be offered the dish of highest flavour which reaches the table; as a well-cured ham, or a highly-smoked ox-tongue, or rarely a mild curry.		
A choice vegetable (which may sometimes precede, but will mostly follow, the roast).	The best in season carefully cooked, and served by itself.	
5. THE ROAST.	Mostly a bird, as a fine capon; game when in season; attended or followed by a salad. Sometimes, rarely, venison.	
6. SWEET ENTREMETS.	One, or several, according to the guests.	
7. SAVOURY "BOUT."	Ranges from a morsel of cheese to a perfectly made *soufflé*, or *beignet* of Parmesan; or may consist of caviare, dried fish, fish-roes, devilled biscuit, grilled mushroom, etc.	

DESSERT.

The essentials, then, of a dinner reduced to its lowest term are— **The lowest term essential for dinner.**

1. PRELIMINARY . .	Soup only: or fish only, if soup disagrees, or is objected to. Both, if desired.
2 and 3. THE MEAT AND *entrée.*	Meat alone; or fish in its place, if soup only has been taken; or the *entrée* alone if lighter food than meat is preferred.
4. A ROAST	A roast bird of some kind.
5, 6, and 7. *Entremets.*	A vegetable; sweet, or savoury—one of each only, or two only, as preferred.

In order to illustrate the foregoing remarks, I shall now furnish a few examples of small but complete dinners; which are easily reducible, however, to the "lowest term," by the omission of a dish or two on the principle laid down. In each *menu* a choice of soups, fish, *entrées*, roast and sweet *entremets*, are given; constituting, in fact, the *menus* of two dinners. Such a double *menu* is sketched from the materials most in season for each month in the year, making twenty-four dinners in all. I have ventured to do so because the suggestion has been so frequently made that practical illustration of the principles advocated should be appended, and also because it appears possible that a few examples may, perhaps, be of some slight

Examples of moderate menus to follow for each month in the year.

Menu for each month.

service to young or inexperienced persons, if any such there be. I wholly disclaim any idea of furnishing programmes here for elaborate dinners, or "state" occasions; and only intend to suggest simple products which any good or "thorough good" cook may furnish properly, at all events with a little preliminary practice in some instances. Perhaps the truth is scarcely yet sufficiently recognized that the quality or character of a dinner does not depend on the number, the complexity, the cost, or even on the rarity of the component dishes. Let these be few in number, and be simple in composition; but if the material itself is the best of its kind, well cooked and tastefully presented, the dinner may rank with the best, and is certain to please.

Quality to be sought, not complexity.

I have long been forced to the conclusion that *menus*, as a rule, should be written altogether in the French language. So many French culinary terms have been naturalized, so many more are almost if not quite untranslatable, that the endeavour to write *menus* in English invariably results in an objectionable mixture of the two languages, resembling a mongrel patois. As examples, those of the first three months and those of the last month shall be written as far as possible in English, and the remainder will be given in French. In some of them the special dish of vegetable is served before the roast, in which case it will be marked by itself as a "*Legume*," and the

Menus should be written in French.

sweets will be described as "*Entremets sucrés.*" When the vegetable is placed after the roast, both it and the succeeding sweets will be ranked together simply as "*Entremets.*"

Some find it difficult to select for each species of English fish its appropriate name in French to adopt in a *menu.* A full list is given, each word with its gender (see Appendix, p. 292).

The *menus* for January, February, and March are written in English as far as possible.

JANUARY.

SOUP	Brunoise.	Consommé, with Italian pastes.
FISH	Fillets of Sole à la Cardinal.	Crimped Cod and Oyster Sauce.
RELEVÉ or REMOVE	Roast Leg of Mutton, with purée of Onions and Haricots (à la Bretonne).	
ENTRÉE ...	Sweetbreads à la Financière.	Braised Ox-tongue and Spinach.
ROAST	Pheasant.	Capon stuffed with fresh truffles.*
VEGETABLE	Seakale and Butter Sauce.	
ENTREMETS	Iced Coffee, or Vanille Soufflé.	Meringues aux Confitures.
	Soufflé of Bloater on Toast.	Curry of Shrimps on Fried Croutes.

* Fresh French truffles are in perfection in December and January, to which last-named month, fruitful in all good things, this dish might well be relegated; but are still in season through February. Fair English truffles, notably inferior, however, to the French black truffle, may be found in Covent Garden a month or two later. See also remarks respecting them, pp. 270, 271.

FEBRUARY.

SOUP	Paysanne.	Purée of White Haricots, or Lentils.
FISH	Fillets of Turbot à la ravigote.	Broiled Herring and Mustard Sauce.
RELEVÉ or REMOVE	Braised neck cutlets of Veal, and Macedoine or Haricot of Vegetables.	
ENTRÉE ...	Croquettes of Oysters, or Scalloped Oysters.*	Mutton Cutlets à la Soubise.
VEGETABLE	Stewed Celery in gravy.	Chicory in gravy.
ROAST	Wild Duck, Sauce Bigarade.†	Hare or Snipe.
SWEET ENTREMETS	Apricots, Peaches, or Pears with Rice.	Baba with Rum.
	Caviare on toast.	Slices of Cod roe on toast, devilled.

MARCH.

SOUP	Croute au pot.	Purée of Turnips, or of Artichokes.
FISH	Boiled Salmon, Sauce Hollandaise with capers.	Red Mullets, baked.‡
RELEVÉ or REMOVE	Broiled Steak from the fillet, Maître d'Hotel Sauce.	Pork Chop, Sauce Robert.
ENTRÉE ...	Quenelles of Rabbit, purée of Celery.	Timbale of Macaroni à la Milanaise.
VEGETABLE	Stewed Mushrooms.	Early French Beans, tossed in Butter.

* Another mollusc, the true "scallop" (*Pecten maximus*), may be substituted for oysters as an *entrée* for occasional change in the spring season. It was formerly largely consumed, being originally cooked in the manner which is now commonly adopted for the oyster, when presented as above described. Long after the scallops, oysters came to be esteemed, and, being cooked in the same way, were therefore said to be "scalloped." The original "scallops" may still be had at our fishmongers', and when thinly sliced and so dressed, are by no means to be altogether neglected.

† See p. 154. ‡ See p. 192.

MARCH—*continued.*

ROAST	Guinea Fowl, with Cress or young Salad.	Early young Chickens farced.
SWEET ENTREMETS	Spring Tart (Rhubarb).	Charlotte Russe, with pistachios.
	Herring, or Herring Roe on Toast.	Patties of dressed Lobster au gratin.

From this place the *menus* are written in French.

APRIL.

POTAGE.....	Printanier.	Consommé au Riz, à l'Italienne.
POISSON ...	Truite grillée à la Hollandaise.	Eperlans frits.
RELEVÉ.....	Aloyau braisé à la Niveraise.	Noisettes de Mouton à la Parisienne.
ENTRÉE ...	Soufflées de Jambon.	Petits Soufflées de Volaille au fond d'artichauts.
LEGUMES ...	Asperges d'Argenteuil.	
RÔT	Poulet et Salade.	Canetons.
ENTREMETS SUCRÉS	Bavaroise au Chocolat.	Crème au Caramel.
	Petits Soufflés au Parmesan.	Anges à cheval.

MAY.

POTAGE.....	Bonne femme.	Créçy.
POISSON ...	Filets de Maquereau grillés, Maître d'Hôtel.	Sole à la Colbert.
RELEVÉ.....	Selle d'Agneau braisée, Macédoine de Légumes.	
ENTRÉE ...	Crème de Volaille aux truffes.	Tête de Veau en Tortue.
LEGUMES ...	Carottes à l'Allemande.	Petits pois à la Flamande.
RÔT	Cailles, bardés.	Levraut.
ENTREMETS SUCRÉS	Crème frite aux amandes amères.	Parfait au chocolat.
	Œufs de Pluvier.	Canapés de Crevettes.

JUNE.

POTAGE.....	Pot-au-feu.	Bisque d'Écrevisses.
POISSON ...	Saumon de Severn tailladé, sauce au fenouil; ou sauce verte froide.	Raie au Beurre Noir, ou sauce au câpres.
RELEVÉ.....	Fricandeau de Veau à l'Oseille.	
ENTRÉE ...	Chaudfroid de Cailles.	Quenelles d'homard en belle vue.
RÔT	Canards aux petits pois.	Oison, Salade.
LEGUMES ...	Asperges froides en salade.	Petits pois à la Française.
ENTREMETS	Purée de groseilles glacée.	Nougat à la Crème.
	Kari d'homard en aspic.	Croutes à l'Indienne.

JULY.

POTAGE.....	Purée de Pois (St. Germain).	Purée de Pommes de terre aux poireaux.
POISSON ...	Carrelets frites.	Aigrefin farcie au four.
RELEVÉ.....	Epaule d'Agneau à la purée d'Artichauts.	
ENTRÉE ...	Bouchées à la Reine en belle vue.	Poulet à l'Estragon.
RÔT	Chevreuil.	Pluviers.
LEGUMES ...	Salade aux Tomates.	Haricots verts, ou panachés, sautés au beurre.
ENTREMETS SUCRÉS	Gelée au Kirsch, garnie de Cerises.	Bavaroise aux fraises.
	Canapés d'Anchois.	Petits Filets de Saumon au diable.

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* A *bisque* is understood to be a well-flavoured and garnished *purée* of crayfish, as above; but the same treatment of prawns, of lobster, and also of crab, produces excellent *bisques*. Some apply the term to certain *purées* of game, at the risk, perhaps, of rendering the meaning of the word uncertain.

AUGUST.

POTAGE.....	Purée de Chicorée, ou d'Épinards.	Consommé au Macaroni, ou au Vermicelle.
POISSON ...	Sole Frite, citron; ou Sauce verte.	Barbue, Sauce aux Crevettes.
RELEVÉ.....	Poitrine de Mouton à la Chicorée.*	
ENTRÉE ...	Filets de Caneton garnis en aspic.	Soufflés de Veau aux petits pois, en aspic.
RÔT	Dindonneau.	Coq de Bruyère ("grouse").
LEGUMES ...	Fèves de Marais à la Poulette.	Salade de Légumes.
ENTREMETS SUCRÉS	Macédoine des Fruits.	Crème aux framboises.
	"Dressed Crab."	Coquilles à la Jure.

SEPTEMBER.

POTAGE.....	Crème d'Orge à la Hollandaise.†	Julienne.
POISSON ...	Aigrefin grillé à la ravigote.‡	Sole à la Normande.
RELEVÉ.....	Haricot de Chevreuil.	"Beefsteak Pudding à l'Anglaise.
ENTRÉE ...	Filets de Poulet aux Truffes, Sauce Suprème.	Blanquette de Ris d'Agneau à la Toulouse.
RÔT	Perdreaux.	Poularde au cresson.
ENTREMETS	Chou-fleur au gratin.	
	Charlotte aux pommes.	Omelette soufflée.
	Croustades de la merluche fumée.	Champignons grillés.

* An excellent dish, first braised, then cooled; finished with bread crumbs in the oven, or on the gridiron, and garnished with a *purée* of endive, or of spinach, or with tomatoes. The trimmed neck similarly treated makes a more substantial remove.

† The distinctive and agreeable addition, besides the little *quenelles* of fowl, in this soup, is the handful of sorrel leaves, which are still in season during this month.

‡ *Merluche* is generally used in this country to denote "haddock," but the French word merely designates any dried fish. *Aigrefin*, or *aiglefin*, is the true equivalent for haddock.

OCTOBER.

POTAGE.....	Purée de Volaille (à la Reine).	Purée de Tomates.
POISSON ...	Filets de Barbue Frits.	Dorée, Sauce aux huîtres.
RELEVÉ.....	Filet de Bœuf à la Milanaise.	
ENTRÉE ...	Civet de Lièvre.	Fricassée de Poulet.
LEGUME ...	Artichauts au Beurre.	
RÔT	Faisan.	"Black Game."
ENTREMETS SUCRÉS	Omelette au confiture.	Beignets de pommes, etc.
	Canapés de Jambon.	Rissolettes à la Caire.

NOVEMBER.

POTAGE.....	Purée de Gibier.	Soupe aux Choux.
POISSON ...	Sole au vin blanc, garnie aux huîtres.	Merlan grillé, Sauce au Câpres.
RELEVÉ.....	Selle de Mouton Rôtie, "Laver."*	
ENTRÉE ...	Faisan bouilli, à la purée de Céleri.	Salmi de Perdreaux.
RÔT	Bécasses ou Bécassines.	Oie.
ENTREMETS	Foie Gras en Aspic, Salade Macédoine.	Pommes de Terre Sautées au Beurre.
	Savarin.	Meringues à la Crème.
	Croutes au chasseur.	Petites Coquilles de Macaroni au Gratin.

* Laver is in season from October to March, and consists of two native marine plants, *Porphyra vulgaris* and *Ulva latissima.* It is unknown in France, and recognized in few of our own cookery books. A most excellent adjunct to roast mutton. Let it soak in two fresh waters, about an hour in each, to get rid of the salt; then put it in a saucepan with some hot water, and simmer until quite soft and mucilaginous; dress it as spinach, with butter, or with a little stock, and a dash of lemon juice; serve hot.

The last *menu* is given in English.

DECEMBER.

(*Christmas Dinners.*)

SOUP	Consommé, with Italian pastes.	Oyster.
FISH	Turbot, Hollandaise sauce with capers.	Brill and Tartare Sauce.
RELEVÉ or REMOVE	Turkey stuffed with Chestnuts, or fresh Truffles. Fillet of Beef, Horse-radish Sauce.	
ENTRÉE ...	Soufflé of Fowl, Sauce with fresh Truffles.	Westphalian Goose Breast with Winter Spinach.
ROAST	Game in Season.	
ENTREMETS	Spinach in gravy.	Stewed Celery.
	Plum Pudding, Brandy Sauce.	Mince Pies. Chartreuse of Oranges.
	Welsh Rarebit.	Devilled Biscuit.

Menus in French of higher class.

Eight more *menus* follow here, in French, requiring for their proper execution a first-class cook. Two are for winter, two for spring, and four for the autumn, as illustrations of more finished dishes than those previously given; all of which, although excellent and typical combinations, meriting the highest care and talent when available, are also within the reach of most middle-class households where an interest in cookery exists.

DECEMBER AND JANUARY.

Huîtres.

POTAGE.....	Consommé à la Royale.	Mulligatawny claire.
POISSON ...	Filets de Sole à la chevreuse.*	Filets de Sole à la Villeroy.†
RELEVÉ.....	Selle de Venaison du Forêt noir, "Rey Rücken," rotie à la Vienne.‡	Filets-mignons de bœuf à la Pompadour.
ENTRÉE ...	Petits soufflés de Volaille, Suprême à la Perigueux.	Crême de Faisan aux truffes.
	Jambon braisée en Bourgogne.§	Langue de Bœuf braisée.§
LEGUME ...	Asperges d'Argenteuil.	
RÔT	Cailles Bardées.	Becasse sur croute.
ENTREMETS	Truffes fraîches à la Serviette.‖	Petits Aspics au foie gras.
	Pouding à la Nesselrode glacé.	Pouding à la Diplomate.

Petits bouts du Kari complet.¶

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* Dubois, p. 520.

† Dubois, p. 522.

‡ May be obtained from one or two German houses during the winter months direct from Black Forest in excellent condition.

§ See p. 110, *et seq.*

‖ Clean well; simmer in water with little sherry added, half an hour. Serve hot, covered in the folds of a napkin.

¶ A miniature curry. Each cooked in a small porcelain shell; eight or ten may be made from a plover or from a brace of snipe, each garnished with little bits of chopped gherkins and sweet chutnee, surrounded with a border of rice properly boiled, served hot; the contents of each only amounting to two or three mouthfuls. Little shells, made to stand the fire, may be found in varied forms at Goode's in South Audley Street.

MAY.

POTAGE.....	Consommé à la Jacqueline.*	Purée d'Asperges.
POISSON ...	Truite au court bouillon.	Filets de Sole à la Chevreuse.
RELEVÉ ...	Filet de bœuf à la Chantilly.	Gigot de Mouton braisé à la Bercy.
ENTRÉE ...	Ris de Veau à la Marsilly.	Boudins de Volaille à l'écarlate.
RÔT	Ortolans aux croûtes, ou Canetons.	Cailles ou Canetons.
ENTREMETS	Haricots, verts étuvés.	
	Riz à la crème framboise.	Gâteau de Plombières.
	Soufflé au Gruyère.	Brochettes de Homard.

SEPTEMBER.

POTAGE.....	Purée de Levraut.	Consommé de Volaille à l'Estragon.
POISSON ...	Sole à la Trouville.	Quenelles de Merlan à la Montglas.
RELEVÉ ...	Cotelettes de Veau, piquées à la Soubise.	Pointe de bœuf à la Flamande.
ENTRÉE ...	Mousseline de Volaille chaude.	Filets mignons de poularde à la Montpensier.
RÔT	"Grouse."	Perdreaux.
ENTREMETS	Fonds d'Artichauts à la moëlle.	
	Plombière aux cérises.	Gâteau bordelais.
	Croûtes au foie-gras.	Sardines au gratin.

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* *Consommé* of fowl, thickened with a *liason* of yolk of egg with cream, adding spring vegetables cut in dice.

OCTOBER.

POTAGE.....	Velours.*	Consommé à la Nillson.†
POISSON ...	Darnes de Saumon à la Matelote.	Crème de Homard.
RELEVÉ ...	Noisettes de Veau aux champignons.	Châteaubriand à la moëlle.
ENTRÉE ...	Petites timbales de Volaille aux truffes.	Filets de Caneton à la Périgueux.
RÔT	Râble de Lièvre à la crème.	Dindonneau farci.
ENTREMETS	Stachys tuberata à la poulette.‡	Crême de topinambours.
	Gâteau Fleury.	Parfait au Nougat.
	Canapés de Provence.	Petits Soufflées de merluche fumée sur croutes.

On looking through the foregoing *menus*, it may be observed that the most substantial dish has been placed next after the fish, and that it is followed by the *entrée*, after which comes the "roast," which in its turn is followed by the choice vegetable served apart. Those who prefer the *entrée* before the substantial dish, can so arrange it; but whenever the latter happens to be roasted, as may sometimes be the case, it interferes most undesirably, by juxtaposition with the "roast" proper. This error may then be to some extent corrected by placing the choice vegetable between the two, *i.e.* before the "roast" proper instead of after it; and this course

* A smooth *purée* of the red part of the carrot; the basis being a clear *bouillon*, thickened with tapioca.—*Dubois.*

† A *consommé* of fowl, elegantly garnished.—*Dubois*, p. 443.

‡ See p. 176.

should be taken whenever the first-named change is made.

In all cases, too, there should be a marked difference in the material and culinary treatment of any two consecutive dishes; thus it is obviously undesirable that one white (or brown) preparation should follow another; a *quenelle* of veal, for example, after a boiled sole; or that a *salmi* of game should precede a roast pullet. It may be observed that white and brown meats and sauces mostly alternate, that grills and braises contrast; that a delicate white *entrée* successfully introduces the roast, that when the latter is substantial, as a haunch of venison, or a saddle of mutton, the preceding *entrée* may be less important; and so on. As a rule, to which there are a few exceptions, the procession of dishes after the fish is from the substantial to the more delicate; after which the appetite is stimulated by contrasts. Thus, the piquant flavour of the roast, with its "taste of the fire," is welcome, being sometimes followed by the soft and succulent vegetable, the young peas or stewed celery, or the globe artichoke, preparing the palate for a slice of highly-cured ham, tongue, or Westphalian goose-breast, with a delicate scent of pure wood smoke. On the whole, perhaps, this latter is practically most welcome after the *entrées*, and before the choice vegetable preceding "the roast," the place of which is then last before the sweet. The final impression

Effects of contrast.

Proceed by steps from delicate flavours to the piquant.

must, of course, be a savoury one, which the palate receives, being thus rendered "clean," prepared to rest—or perchance to relish the last glass of wine by the delicate savoury morsel which terminates the *menu.*

I desire to ask special attention to the fact that numerous popular dishes have been omitted—and purposely so—from these *menus,* simply for the reason that they are well known, and can therefore be adopted at pleasure by way of addition or exchange. Thus, none of the joints, such as sirloins, rounds, haunches, saddles, loins, shoulders, etc., have been named, with perhaps a single exception only. Everybody is familiar with English joints, which have been on this account excluded from a list necessarily so restricted as the limits of only thirty-two *menus* demand. For the same reason, I have not included in them turtle in any form, nor curries; nor such special soups as mock-turtle, mulligatawny, hodge-podge, split-pea,* giblet, water-souchets, and fish soups; nor whitebait, nor the fresh-water fish, carp, tench, dace, pike, etc.; nor among sweets, tarts, ices, sorbets, and the farinaceous puddings, custards, etc.; nor have I named the preliminary oysters, which

Have omitted the most familiar dishes, such as "joints," "turtle," "special soups," and fish, oysters, etc., to save needless menu writing;

* Our common split-pea soup, wholesome and agreeable in winter, with dried mint and tiny *croûtons,* is wholly unknown in France; the dried green peas, termed *pois cassés,* only are used for similar purposes there.

may well be added during the season, September to April inclusive, as an additional luxury. My object has been to suggest a few of the leading smaller dishes of a comparatively simple and not expensive kind, and to place them in proper juxtaposition in relation to each other, so far as this has been possible, with the view of suggesting some little diversity in the dietary of our better middle-class tables. Almost every one also is more or less typical in its character, so that given the knowledge of preparing it, several minor varieties can be produced. At the same time, such dishes are unpretentious, and do not demand the skill of a rare expert; yet, when really well executed, they offer results not to be surpassed by any, either in relation to refined tastes, or in wholesome and nourishing qualities, in relation to the powers of the stomach and the wants of the system. To the remark regarding an estimate of the expense just made, I admit two or, at most, three exceptions, of which the *chapon truffé* is the most obvious example. And it is not suggested, moreover, that this should be prepared at home, but obtained only during the season of fresh truffles from France; stuffed on its native soil with native produce, it forms a very important addition to a dinner, and stamps it with a rare distinction. There is no difficulty in procuring truffled poultry of any size by rail direct from Paris, when the indulgence of a little extravagance

introducing simple dishes less used than they deserve to be.

Remarks on "chapon truffé,"

is to be permitted; but even this trouble is not necessary, since a few first-rate London poulterers import fresh truffles, and will furnish a fine Dorking fowl properly stuffed, the quantity used determining in any case the cost of the dish.*

and upon truffles.

I have somewhere before said that the fresh truffle is so immeasurably superior to those preserved in bottles, that the latter appears to me scarcely worth eating, except for their agreeable nutty texture; and, mainly by virtue of the law which operates through the association of ideas, for the memory of delicious flavour and subtle aroma, existing only when the truffle is fresh, as during its term of harvest, about ten or twelve weeks after the end of November. I refer, of course, only to the French growth, superior as it is by many degrees to our own, and to that of North Italy also.† For those who have not

* No better names could be mentioned than those of Chevet, of the Palais Royal, and Bailey, of Mount Street, Grosvenor Square.

The French truffle—*truffe noir*, is a subterrancous fungus, of the species "Tuber." *T. melanosporum* is found in the woods, chiefly beneath the shade of the oak, in the neighbourhood of Perigueux and of Angoulême. The British truffle, *T. æstivum*, found mostly in beech woods, is in season in the course of the summer, when it may be found in Covent Garden; but even when fresh is greatly inferior to the French variety in scent and flavour.

† The above, written some eight or ten years ago, accurate as it then was, represents a condition now considerably improved, and I leave the text, adding this note for the purpose of

eaten and appreciated the fresh truffle, it appears to me that eating them when preserved is more the result of fashion, than of much gratification derived from the act. Something of the same kind may be said of caviare. Once eaten in its freshest and finest condition, say in Moscow, and the black herring-flavoured, small-seeded caviare, commonly found here, becomes uneatable. But the pale grey and fresher kind does, to a satisfactory extent, recall the delicious qualities of the best Russian product when fresh. And this latter may sometimes be found at Berlin, a distance it can reach by rail without injury.*

Caviare.

emphasizing the change. The mode of preserving the truffle recently adopted, in air-tight tins instead of the well-known thick bottles—so contrived as to look large, and to hold but a few ounces—is far more successful than these in preserving the fine scent and nut-like texture of the tuber. Cobbett, of Pall Mall, and Morel, of Piccadilly, have effected this improvement. But during the short winter season of the *fresh* truffle, each receives a direct supply by rail from the Perigord district at least three or four times a week.

* It may be added also, that a fairly good, not highly salted, caviare is now less difficult to procure than it formerly was, thanks to increased facilities for rapid transit. It should be obtained as soon after arrival here as possible, in time for immediate use.

CHAPTER XV.

The public dinner—Its undue length—Toasts too numerous—Suggestions for shortening the proceedings—Good cookery independent of pedantic and complicated receipts—Schools of cookery—Elementary scientific teaching wanted to make cookery interesting and a progressive art—Better food, in better condition, and in more abundant supply, a pressing want for London—Conclusion.

BEFORE concluding, a remark or two may be permitted in reference to that great British institution, the public dinner. Its utility must, I suppose, be conceded, since for a vast number of charitable and other useful institutions, the opportunity of commanding once a year the ear of a generous British public for an exposition of their claims, seems in no other way at present attainable. A royal or noble chairman, a portentous *menu*, an unstinted supply of wine, such as it is, and after-dinner speeches in variety, form an *ensemble* which appears to be attractive to the great body of "supporters." On the other hand, those whose presence is enforced by the claim of duty find these banquets too numerous and too long. The noise and bustle, the badly served although pretentious dinner, the glare of gas and

The public dinner and its uses;

the hardship it entails.

the polluted air, the long, desultory, and unmeaning speeches, interspersed with musical performances—which, however admirable in themselves, extend unduly a programme already too comprehensive—unfit many a man, seriously occupied, for the engagements of the morrow. Might it not be worth while to try the experiment of offering fewer dishes, better service, and abolishing half the toasts? Might it not be possible to limit the necessary and essential toasts of a public dinner to the number of three or four—these to be followed at most by one or two special toasts associated with the object of the dinner? With the utmost deference to long received usage, and after some little consideration, I venture to suggest that the following programme would at all events be an improvement on the present system, if such it can be called.

Hints for its improvement.

Diminish number of the toasts.

The first toast, or toasts, by which we declare our fidelity to the Crown, and our loyalty to the person of the Sovereign, as well as to the Royal family, to remain, by universal consent, as before. The next, or patriotic toasts, unlike the preceding, are regarded as demanding response, often from several persons, and here it is that time is generally wasted. These might therefore be advantageously compressed into one, or perhaps two, which need not be limited to the military and naval services, although it would, of course, include

Toasts which are essential.

Suggestions for combination and compression.

them. The object might be attained by constituting one or two comprehensive patriotic toasts, as "The United Services," to embrace the army, navy, and volunteers, and to be responded to either by a naval or a military officer as arranged, but by one only. Then might naturally follow "The National Institutions," consisting of, say (1) Parliament: its leaders. (2) Justice: the judges. (3) Religion: its ministers. (4) Science and Art: heads of societies, academies, colleges. (5) Literature and the Press: distinguished writers. One of these, as a rule, only to be given, and in nine cases out of ten, probably number one would be the most appropriate and the most popular.

The next to be "the toast of the evening:" in other words, the particular subject of the dinner. After this might follow a fourth, embracing the healths of officers connected with the subject, visitors, etc., if necessary.

Combination and compression continued.

I confess I see no reason why the military and naval forces, however profound our respect and our gratitude for their great services to the nation must be—and in this matter I yield to no man—should invariably be responded to by at least two, mostly now by three officers, while the other great, and scarcely less important interests, should be left out of consideration altogether, or be only occasionally introduced. The toast of "National Institutions" would mostly ensure to the chairman and managers of the dinner an

opportunity of obtaining one or two good speeches, say, one for Parliament, or for Justice, or Religion, or for Science, or Literature. The choice to be determined upon by the presence of some individual belonging to any one of these interests, and who is known to be a capable and agreeable after-dinner speaker. Thus all the varied elements of our national life would receive in their turn a due share of attention from the great mass of public diners, and better speeches would probably be secured than by the present mode.

I confess this is rather an episode; but the subject of "toasts" is so interwoven with the management of the public dinner that I have ventured to introduce it. I even dare to think that the proposition may be not unlikely to receive the support of "the chair," the duties of which, with a long array of toasts, are sometimes excessively onerous; only more so, be it recollected, in degree than those, of a humbler kind, which are entailed on many of the guests who are compelled to assist. Considerable improvement has taken place during the last few years in the management of public dinners. This is largely due to the influence of H.R.H. the Prince of Wales, who, when called on to preside at the annual festival of some important charity, which has been so fortunate as to obtain His Royal Highness as their advocate, requires a *menu* reasonably limited, and the elimination of unnecessary toasts and speeches.

Recent improvement and its cause.

In concluding this imperfect sketch of the very large subject indicated by the title employed, I desire to express my strong sense of its manifold shortcomings, especially by way of omission. Desiring to call attention, in the smallest possible compass, to a great number of what appear to me to be important considerations in connection with the arts of selecting, preparing, and serving food, I have doubtless often failed to be explicit in the effort to be brief. It would have been an easier task were time at my disposal to illustrate these considerations at greater length, and to have exceeded the limits of this small volume; I might thus perhaps also have avoided, in dealing with some topics, a tone in statement more positive than circumstances may have warranted. Gastronomic tastes necessarily differ, as races, habits, digestive force and supplies of food also differ; and it becomes no man to be too dogmatic in treating of these matters. *De gustibus non est disputandum* is in no instance more true than in relation to the tastes of the palate. Still, if any rational canons are to be laid down in connection with food and feeding, it is absolutely necessary that something more than the chemical and physiological bearings of the subject should be taken into consideration. With these it is unquestionably essential for any one who treats of my subject to be familiar; but no less necessary is it to possess some natural

Have touched lightly many topics,

which, were not the limits narrow,

might have been advantageously treated at length.

taste and experience in the cultivation of the gustatory sense, just as a cultivation of the perception of colour and a sensibility to the charm of harmoniously combined tints, are necessary to an intelligent enjoyment of the visual sense, and to the understanding of its powers. Hence the treatment of the whole subject must inevitably be pervaded to some extent by the personal idiosyncrasy and predilections of the individual. It is this fact, no doubt, which, operating in relation to the numerous writers on cookery, has tended to produce some of the complication and confusion which often appears in culinary directions and receipts. But the gastronomic art is a simpler one than the effusions of some of its professors might lead the wholly uneducated to believe; and the complicated productions originated by some of its past and greatest practitioners are as unnecessary as are the long and complicated prescriptions formerly in vogue with the leading physicians of past time. Both were the natural outgrowths of an age when every branch of technical education was a "mystery;" and when those who had attained the meaning thereof magnified their craft in the eyes of the vulgar by obscuring what is simple in a cloud of pedantic terms and processes. But that age and its delusions are passing away, and it is high time for simplicity in the practice of cookery and the service of the table to take the place of some useless and extravagant

Culinary taste and physiological knowledge wanted for the progress of cookery.

combinations and treatment which tradition has handed down.

Schools of cookery and their importance.

The formation of elementary schools of cookery, and the encouragement they have received from the public, augur well for improvement. That they should teach the principles of cookery, that is, of applying heat to food, as well as the practical work of the kitchen, is a matter of the first importance. No doubt the standard of attainment is low in both subjects, and a certain commonplace uniformity in product will pervade the country as the result. Once make cookery a distinct business to which the young may be trained, which it never yet has been, and the chance of now and then producing a first-rate cook, who may advance the art, is within reach. Formerly the practice of cookery was far too often merely a resource for wage-getting among ignorant women, who took to it at hazard, and acquired such traditions as pertained to the kitchen they happened to enter. Thanks to some systematic teaching, which of late has widely extended, there are occasionally some fairly good practical cooks to be met with, but they are very rare, and very few indeed understand the principles on which the art of cookery is based. Until it is taught as a science as well as an art, and there should be no difficulty in doing so, since a very little knowledge of certain chemical and physical laws is requisite to furnish the *rationale* of the changes in food through the application of heat, the cook will

be ignorant of all except that which she has been taught by rule to do, and incapable of improving her practice by applying heat in new ways or acquiring new results by intelligent experiments. Further, until the subject of cooking, with its practice, is recognized in this country as a profession which a man with some education and natural taste can exercise, we must be content to rank below other countries in rearing artists of the first order.

Secure high-class produce,

At the present day it appears desirable, before all things, to secure the highest quality in all produce of the land whether animal or vegetable, the standard of attainment leaving much to be desired in regard to the products of the latter kingdom. Great Britain has long held the first place as to quality for her beef and mutton; in no other country in Europe is it possible to obtain these meats so tender, juicy, and well-developed. The saddle, the haunch, the sirloin, and the round, so admirable on occasions, are only in danger of suffering here, like intimate friends, from a too great familiarity with their charms. But even our standard of quality in meat has been gradually lowered, from the closer struggle, year by year, to produce a fat animal in a shorter space of time than formerly; a result which is accomplished by commencing to feed almost exclusively on oil-cake at a very early period of life. The result of this process is, that size and weight are attained by a deposit of fat, rather than by the construction of

by careful breeding.

muscular fibre, which alone forms the staple of matured and wholesome flesh. Not only are there in these animals large and unnecessary deposits of fat in the cavities, chest, and abdomen of the body, but there is also a proportion of fat seen to be intermixed with the muscular fibres when the meat is cut, making what ought to be lean meat a compound of fat and lean which are inseparable. This is the result of artificial or over-fattening, which does not occur in the flesh of an animal which has passed an active and healthy life in the forest or on the downs. The necessary consequence, of course, is that the characteristic flavour and qualities of fully developed beef and mutton are greatly wanting in modern meat.

Vegetable produce.

Far from satisfactory also is the supply of vegetable and dairy produce to our great city, particularly of the former. It must be confessed that our market at Covent Garden, in relation to capabilities for effective distribution of fresh vegetables, etc., would disgrace a town one-fifth of the size of London. Few of its inhabitants can obtain really fresh green food, and those who succeed pay a heavy price. But their success is only partial, as those few who have a country garden of their own, and are supplied by it, well know. And, comparatively speaking, none but those who are so happily circumstanced, realize the exceeding luxury of possessing well-grown vegetables brought directly from the garden to the table. Again, I think I am

right in saying that a new-laid egg is a luxury which it is not easy in London to ensure by purchase. Whoever would absolutely secure the luxury must keep fowls, and with due care may obtain it, not otherwise.

Bread.

The great staple of our bread, commonly called "baker's bread," is unpalatable and indigestible; and I suppose no thoughtful or prudent consumer would, unless compelled, eat it habitually—used as it nevertheless is by the great majority of the inhabitants of this great city—any more than he would select a steak from the coarse beef whose proper destination is the stock-pot. Let any one compare the facilities which exist in most foreign towns for obtaining the various important articles of diet just named, with the modes of supply afforded in London, and the inferiority of the latter will be so manifest as to become matter of humiliation to an Englishman. I do not raise any question of comparison between our own markets and the Halles Centrales of Paris, covering as they do nearly five acres of closely utilized space, with enormous vaults beneath, in direct communication by tram-road with the railways; nor of the well-stocked Marché St. Honoré, and others of less note. An early morning survey of the fish, flesh, dairy produce, vegetables, fruit, and flowers, which the Halles Centrales display, together with the scarcely less remarkable exhibition of Parisian and provincial life brought together there,

Facilities for distribution of food

presents one of the most interesting and truly foreign spectacles which the city affords.

much wanted in London.

To the long list of needed reforms I have ventured to advocate in connection with this subject, I must add the want of ample and accessible markets in various parts of London, for what is known as country produce. I do this not only in the interest of the millions who, like myself, are compelled to seek their food within the limits of Cockayne, but also in the interest of our country gardeners and housewives, who ought to be able to supply us with poultry, vegetables, and eggs, better than the gardeners and housewives of France, on whom at present we so largely depend. We may well be grateful to these small cultivators, who by their industry and energy supply our deficiencies; but the fact that they do so does not redound to the credit of our countrymen, and, I am bound to add, countrywomen, for the bountiful supply of eggs and poultry which reach us from France is chiefly due to the untiring industry, care, and good management of the poultry-yard which the wives of the small agriculturists there bestow upon it.* Since the foregoing paragraphs were written for the first edition of this work, I am glad to note the improved facilities for obtaining country supplies which now exist, as compared with their absence at that period. Still, so rapidly do the area and population of our city increase, that the claim for more and better fresh food

* See p. 66 for amount imported.

still increases almost in the same ratio as the improved supply.

Have I claimed for the consideration of my subject too great a share in the thoughts and multifarious labours of busy men? I think not. For myself, being not without serious occupations, an attentive study of it has agreeably occupied many leisure hours at home and abroad; but it has furthermore performed good service in the interest of health. And if I have been rightly understood, this imperfect attempt to popularize a few undoubted truths in relation to the selection, the cookery, and the service of food, will be regarded as a manifesto, which assuredly it is intended to be, on behalf of true temperance. Conclusion.

In one word let me conclude—if in professional life, for some of us, the chief power lies in a skilled right hand, and in the temperament which pertains thereto, it is no less true that a practical acquaintance with the laws of diet and digestion becomes also a power in the combat with disease, not far inferior to the other in importance.

My last word, then, no less than my first, shall testify to the value for all men of some knowledge in relation to their Food and Feeding.

APPENDIX.

ON THE POT-AU-FEU, SOUPS, ETC.

Pot-au-feu: Jules Gouffé's instructions for making it—Gouffé's instructions for braising—*Bœuf à la mode*—Vegetable Soup—Author's directions for beef-tea—Table of French equivalents for the English words denoting fish, as a guide in writing *menus*—Table showing when fish is in season—Children's dinner tables—Author's receipt for cheap, nutritious soup—The dinner of the working man, and Mr. Atkinson's suggestions respecting it.

THE POT-AU-FEU.

THE *pot-au-feu*, or pure beef stock, flavoured with vegetables, has long been regarded as the type of a foundation stock for soup-making by all the great leaders of French cookery, for a century or more. The broth obtained by the process is known as *bouillon;* and the portion of meat being maintained intact, not torn or cut in pieces, was in former days invariably served after it as a hot dish to be eaten, *bouilli*, containing as it did a good deal of nutritious matter not to be extracted by hot water, but obtained by the consumer through the action of digestion in the stomach. Such is still the habit of the French peasant and artisan, and is unquestionably the most complete and economical mode of extracting all the nourishing qualities of the meat.

But the *pot-au-feu*, for modern purposes, now appears in any society, however cultivated, as a valuable and agreeable

clear soup, and the process of making it will be given with all necessary details. These are shorter and more simple than the extremely full directions given by Gouffé, in his classical work "Le Livre de la Cuisine," which in previous editions of the present volume were translated at considerable length.*

Take an ordinary gallon stock-pot of copper tinned, with a cover for occasional use only. Ingredients: 2 lbs. of good fresh lean beef from the leg, with ¾ lb. of bone; six ounces each of carrots, turnips, leeks, and onions, one of celery and two of parsnips; a clove stuck in an onion, and a small bunch of kitchen herbs, parsley, thyme, and chervil; a rather small teaspoonful of salt; four and a half pints of water.

Crush the bones well with a mallet, putting them into the pot first. Cut the meat into small morsels, an inch or a little more each way, removing all the fat, and laying them on the bones. Next, pour in all the water cold; and place the pot without its cover on the corner of a steady gentle fire or gas ring. Add the salt, and bring gently to the boil. As soon as the scum rises, remove it with a perforated spoon, and when the liquor boils, pour in a small cupful of cold water to check it and make the scum rise. Bring it slowly again to boiling at least twice, scumming and checking with cold water as before each time, which should suffice. Meanwhile, having sliced the vegetables named, now add them to the pot, which again checks the boiling for a time. When it begins again, draw the pot aside so that it now only simmers, which it should continue to do

* J. Gouffé, "Le Livre de la Cuisine," pp. 39–47. Paris: 1867. Thus he writes: "The production of a good *pot-au-feu* seems to me to be one of those operations, at the same time elementary and fundamental, with which it is of the highest importance to render every one familiar, as soon as domestic cooking is treated of."

for three or four hours. But the vegetables and herbs should be removed and set aside when the former are well cooked, after which they must not remain in the pot, the meat only remaining until the end of the process.

The liquor is now to be poured off into a perfectly clean vessel until cold, and any fat thereon removed. It ought to be clear, with an agreeable odour and colour. The quantity of soup resulting should be diminished about one-third by the process, and should suffice for six or eight persons.

It is generally served at table now with a few full-sized thin slices of freshly cooked carrot, turnip, and leek, in which case it would be more properly termed *à la paysanne*. The addition of a rather thin slice of the crust of a loaf, one to each plate, constitutes it a *croûte au pot*.

The *bouillon*, or good clear beef-broth, produced by the *pot-au-feu*, is the basis of all brown soups. And a decoction of veal and veal bones, with fowl and vegetables as before, similarly treated in all respects, is, or should be, employed as the basis of all white soups, clear or *purées*.

A *consommé* is a stronger decoction of meat than the *bouillon*, with a fuller body and flavour. Compared with the receipt for the *pot-au-feu*, and using the same quantity of water, beef bones, and vegetables there required, add half the weight of veal (meat and bone) as that of the beef, and proceed in all particulars of boiling, skimming, simmering, etc., as for the *pot-au-feu*. It is to be presented perfectly clear when finished, and, if necessary, must be clarified in the usual manner (for which, see a good cookery manual).

Or a *consommé* may be made by using the beef *bouillon* in place of water, adding the additional veal recommended above, and repeating the process of the *pot-au-feu* just referred to. For a *consommé* of game, adopt the *pot-au-feu*

process, together with grouse, partridge, or hare, as preferred in weight, at least equal to half the weight of stock meat used. For a *consommé* of fowl, adopt the same process as above advised, but with a proportionately increased weight of veal and fowl, to the water used for the white *bouillon* above, together with vegetables deemed appropriate.

Ordinary Braising.

Jules Gouffé's instructions for *Bœuf à la mode,* referred to at p. 107—

"Take about 4 lbs. of thick beef-steak cut square. Lard the meat and place it in a stewpan with rather less than a pint of white wine, a pint of stock, a pint of cold water, two calves' feet already boned and blanched, and two or three slices of bacon. Put it on the fire, adding about half an ounce of salt. Make it boil, and skim it as for a *pot-au-feu;* next, having skimmed it, add fully 1 lb. of carrots, one onion, three cloves, one faggot of herbs, and two pinches of pepper. Place the stewpan on the corner of the stove, cover it, and allow it to simmer very gently for four or five hours at least. Try the meat with a skewer to ascertain when it is sufficiently cooked; then put it on a dish with the carrots and the calves' feet, and keep them covered up hot until serving. Next, strain the gravy through a fine tammy; remove carefully every atom of grease, and reduce it over the fire about a quarter. Lastly, place the beef on the dish for serving; add the calves' feet, each having been cut in eight pieces, the carrots cut into pieces the size of a cork, and ten glazed onions. Arrange the calves' feet, carrots, and onions round the beef, pour the sauce over the meat, keeping the surplus for the next day. Taste it, in order to ascertain if sufficiently seasoned."

Gouffé continues: "The important question, after the choice of the meat, is the cooking, which must be done entirely by slow simmering; and this is one of the most essential points for success. For when exposed to a hot fire the result is a white, watery, insipid gravy, such as is too often found in kitchens where cooking is carelessly done. The gravy ought to be red in colour, rather gelatinous in consistence, and full of the agreeable flavour and nutritive matter of both meat and vegetables, which is the distinctive mark of the dish. To obtain this excellent quality, the vegetables should be put into the braising-pot at the proper time, so that all are cooked together." *

I cannot resist adding that Gouffé's directions amount almost to an early step in the direction of the slow process in cookery, which I have advocated so much during the last few years. This braise would probably be still more excellent if, after the initial boiling and skimming, it were submitted only to a temperature not exceeding 175° Fahr. during seven or eight hours.

Consommé of Fresh Vegetable Roots from Gouffé.

Cut in slices 2¼ lbs. of carrots and the same weight of onions; put them in a stewpan with some parsley, thyme, shalot, and celery, and also 1 lb. 2 ozs. of butter.

Fry gently to a red colour, add 8¾ pints of water, let it boil, and skim it.

Next put into it 1¾ pint of peas and a couple of lettuces.

Then add 1¼ oz. of salt, ⅓ oz. of whole pepper, 1 pinch of nutmeg, 3 cloves, 1¾ pint of dried peas, 1¾ pint of white haricots.

Let it simmer for three hours at the side of the fire, skim

* J. Gouffé, "Le Livre de Cuisine," pp. 126–128. Paris: 1867.

off the grease and strain through a cloth; then put aside for use (*Op. cit.*, pp. 348, 349).

This *consommé* may form the basis of spring soup, *julienne*, *brunoise*, *aux œufs pochés*, *crécy*, etc., fresh vegetables and other materials being added, after the analogy in each case of the *potages gras*.

The Author's Directions for Making Good Beef-tea.

Chop fine or mince with a machine, a pound and a half of gravy beef from which the fat has been removed.

Place it in an earthen jar with a lid, add a pint of cold water, and let it remain an hour, occasionally stirring and pressing the meat firmly with an iron spoon. Then place the jar, with the lid on, in a saucepan large enough to cover it, with water sufficient to reach nearly to the lid, but not near enough when gently boiling to rise above it and enter the jar.

The water in the saucepan is to be kept at about boiling point or a little under, at the corner of the fire, for three hours, adding a little water occasionally, to replace that which evaporates.

When the time has expired the jar may be removed, the beef-tea drained from the meat, which is then to be pressed as closely as possible through a coarse straining cloth so as to extract all the liquid.

After standing a short time the beef-tea will become clear, much light brown flaky matter falling to the bottom. By no means remove this, as it is nutritious material, unless any special orders have been given to the contrary.

When cold, the fluid will be slightly gelatinous, varying somewhat as the meat used may vary in the amount of skin, tendon, or other fibrous tissue contained therein.

If, however, "shin of beef," which, of course, includes bone, is used as well as gravy beef, say a pound of each, add the meat detached from the bone to the pound of gravy beef and treat them together as already described; but utilize the bone by breaking it with a chopper or hammer, after which the pieces are to be placed in a small saucepan apart, with a pint of cold water, for an hour. Then the whole is to be slowly brought to boiling point, and to be maintained at the same until the liquid is reduced to the third of a pint, which is to be strained off and mixed with the beef-tea already made; a firm jelly will result when cold. A strong solution of gelatine has thus been added to the meat extractives and albumen obtained by the first process, materially improving the value of the compound.

When cold, remove the small quantity of fat which is always to be found on the surface, and heat what is required, as wanted. If the beef-tea is to be served as soon as made without cooling, remove as much of the fat as possible with a teaspoon, and the small remainder by means of white blotting-paper.

No better vessel exists for the treatment of the meat (not for the bones) than a small Warren pot (see p. 99).

Then it should be remembered that the beef-tea can be rendered far more nutritious, when the invalid is able to take any solid addition, by adding thereto a small quantity of well-minced rump-steak. For this purpose the meat should be brought to the condition of pulp by passing it three or four times through the best mincing machine which can be obtained, after having broiled the meat lightly only (see Mincing at pp. 168, 169).

ON MENU WRITING.

Question sometimes arises in writing *menus* as to the correct word in French for each species of fish with which we are familiar in England. Referred to at p. 256. A list is here supplied—

Salmon . . .	saumon, *masc.*
Trout . . .	truite, *fem.*
Turbot . . .	turbot, *m.*
Brill . . .	barbue, *f.*
John Dory . .	St. Pierre, *m.*
Cod . . .	cabillaud, *m.*
Salt cod . . .	morue, *f.*
Haddock . . .	aigrefin, *m.* ; merluche, *f.*
Whiting . . .	merlan, *m.*
Sole . . .	sole, *f.*
Red mullet . .	rouget, *m.*
Smelt . . .	éperlan, *m.*
Whitebait . .	blanchaille, *f.*
Plaice . . .	plie, *f.*
Flounder . . .	carrelet, *m.*
Gray mullet . .	mulet, m.
Skate . . .	raie, *f.*
Sturgeon . . .	esturgeon, *m.*
Ling . . .	lingue, *f.*
Bream . . .	bréme, *f.*
Mackerel . . .	maquereau, *m.*
Herring . . .	hareng, *m.*
Sardine . . .	sardine, *f.*
Gurnard . . .	gurnard, grondin, *m.*
Pike . . .	brochet, *m.*
Carp . . .	carpe, *f.*
Perch . . .	perche, *f.*
Grayling . . .	ombre, *f.*
Eel . . .	anguille, *f.*
Crayfish . . .	écrevisse, *f.*
Shrimp . . .	crevette, *f.*
Prawn . . .	chevrette, *f.*
Crab . . .	crabe, écrevisse de mer, *m.*
Lobster . . .	homard, *m.*
Oysters . . .	huîtres.
Mussels . . .	moules.

MONTHS OF THE YEAR WHEN FISH IS IN **FINE** CONDITION.

The spaces are in that case left blank; when not fine a × is placed under the month. It may often be fairly good when the month is crossed, but it is not *fine*. Referred to at p. 251.

Fish.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Brill				×	×	×	×					
Cod						×	×	×	×			
Crab	×	×	×	×					×	×	×	×
Dory	×	×				×	×					
Eel					×	×	×					
Flounder	×				×	×					×	×
Grayling	×	×	×	×	×	×	×					
Gurnard	×									×	×	×
Haddock			×	×	×							
Hake		×	×	×	×							
Halibut				×	×	×	×	×	×			
Herring	×			×	×							
Ling					×	×	×	×	×	×		
Lobster	×										×	×
Mackerel								×	×	×		
Mullet (red)	×	×	×								×	×
„ (grey)	×	×	×	×	×	×					×	×
Mussel				×	×	×	×					
Oyster					×	×	×	×	×			
Pike			×	×	×	×	×	×	×			
Plaice		×	×	×								
Prawn	×										×	×
Salmon	×	×							×	×	×	×
Sea trout	×	×							×	×	×	×
Skate					×	×	×	×	×			
Smelt					×	×	×	×				
Sole			×	×								
Sturgeon				×	×	×	×	×				
Trout	×	×	×							×	×	×
Turbot	×	×									×	×
Whitebait	×	×							×	×	×	×
Whiting				×								

The Children's Dinner Table.

This has become so well known and so popular an institution that I can scarcely leave it unnoticed. The more so as its origin is, I may be permitted to say, not without interest personal to myself.

Victor Hugo, when an exile in Guernsey, established a substantial meat dinner for very poor children, in the belief that even this amount of good nourishment, supplied once or twice a week, would afford them valuable aid during the period of rapid growth, by developing the constitution of these young people, and thus improve the stamina of the rising generation. And he advocated the general adoption of the system from this point of view, in some letters on the subject in the local press in the year 1865. By some means these fell into the hands of Lady (at that time Mrs.) Thompson, who forthwith resolved to try the experiment in Marylebone. Having consulted the clergyman of the parish, who approved the plan, she at once issued the following prospectus:—

"It is proposed to supply hot dinners of wholesome food for poor children, especially those who are, or have been in bad health, and who need more nutritious diet than their homes afford.

"On and after the beginning of October it is intended to engage a room where twice a week such children may come for a meal of meat, vegetables, and bread, all of the best quality; and where, with only just enough discipline to insure good order and behaviour, their hunger shall be satisfied, the means of restored health provided, and habits of neatness taught.

"The room will be in the immediate neighbourhood of High Street, Marylebone.

"The arrangements are in active progress, but the cost of furniture and kitchen utensils involves some outlay, hence immediate donations are earnestly solicited for this purpose.

"Further, any person may become a subscriber by paying the sum of 3*s.* 6*d.*, which will entitle him or her to ten tickets, and to the privilege of sending children to that number of dinners—each child

paying one penny for every dinner afforded. The ticket must be left at the room before 9 o'clock on the morning of the day on which its recipient will dine, so that the number may be provided for. The dinners will commence in October and continue till July.

"Tickets will be sure of beneficial distribution if forwarded to any of the neighbouring hospitals or local dispensaries, to the clergy, or the district visitors.

"A list of these, and full information on all points connected with the establishment of this 'Children's Dinner Table,' may be obtained by those willing to co-operate, on application to Mrs. Eyre, 20, Upper Wimpole Street; or Mrs. Henry Thompson, Treasurer, 35, Wimpole Street; or Mrs. H. G. Wright, Secretary, 23, Somerset Street, Portman Square. Subscriptions may be paid to the Bankers, Sir S. Scott & Co., 1, Cavendish Square. Tickets may be had at Thomas & Co.'s Stationery Warehouse, 21, Great Marylebone Street.

"*August*, 1866."

The scheme was well supported by friends and neighbours, and came into operation early in October. Her first report thereon (also now before me), dated November of that year, and therefore when the plan had been tried only six weeks, shows that the dinners had been provided "every Wednesday and Saturday at 12 o'clock. The room accommodates 60 children: at present (November, 1886) the largest attendance has been 44." And it goes on to say that "a dinner can be sent to a child too ill to attend, if the messenger applies at the room before nine in the morning," etc.—a further development of the original plan.

This was the first public children's free dinner-table provided in this country. Victor Hugo was delighted with this endeavour to realize his idea in London, and wrote to the pioneer of his views here earnestly and encouragingly to persevere in her work.

From that time to the present day, this institution has continued under the same management, and has been very popular and well supported, so that its funds and operations have been largely increased. A kitchen open daily for good and cheap soup has been associated with it. For many

years the plan has been greatly extended so as to supply also adults, both healthy and invalid, of the poorer classes, every day in the week except Sunday, not only with dinners and soup, but also with beef-tea and rice milk, and continues to do so. Larger premises are soon to be erected (1898).

AUTHOR'S RECEIPT FOR CHEAP, NUTRITIOUS SOUP.

The following is recommended to make a cheap but really good and nourishing soup. Take six pounds of shin of beef; the bone to be broken into small fragments and set, together with the meat cut up fine or minced, to stand two hours in a gallon of water, at about 90° to 100°, occasionally stirring. Then drain off all the liquor; separate all the meat and set this aside. The bones are now to be placed in a saucepan with another gallon of water over the fire and well boiled for six hours, supplying loss from evaporation afterwards by adding sufficient water to make up the gallon. The two liquors may then be mixed and used as a stock to be incorporated with a *purée* of haricots or split peas, etc., and thickened by six pounds of fine or medium Scotch oatmeal. Meantime fry in a pound of lard, onions, celery, and carrots sufficient, sliced, all of which, together with the meat, are to be set aside, well rubbed down, and stirred into the soup at the end of the process.

The *purée* is to be made of twenty pounds of split peas or the same of haricots or lentils, alone or mixed, which have been soaked twenty-four hours in cold water, and slowly simmered until tender, requiring therefore about four hours more. Lastly, the oatmeal is to be mixed smooth in a little cold water, and added by degrees to two gallons of hot water. Bring to the boil and simmer for an hour. Add slowly, thoroughly incorporating all the preceding ingredients

with eight gallons of hot water; add salt and pepper, heat to the boiling point, to be ready for use. The result will be twelve gallons, or ninety-six pints.

COST.

	s.	*d.*
6 lbs. shin of beef	2	3
20 lbs. split peas	2	6
7 lbs. of oatmeal	1	4
Vegetables, say	0	8
1 lb. of lard	0	8
Pepper and salt	0	1
	7	6
Cooking	0	6
	8	0

Or one penny a pint.

The quality of the above is exceedingly good, and has been maintained, as the result of the same receipt, from that time to the present (1898) during each season. If the same ingredients were treated with sixteen gallons of water, making 128 pints and producing 10*s.* 8*d.*, 2*s.* 8*d.* balance might be laid out in bread, and a substantial slice given to accompany each pint of soup, for the same cost of one penny. But even then the soup is stronger than that usually furnished at the cheap dinner table for children.

The receipts furnished by the Rev. Canon Moore Ede in his little work, referred to at p. 117, are excellent, and suitable for supplying some variety of cheap nutritious foods for such dinners.

THE DINNER OF THE WORKING MAN.

Mr. Edward Atkinson, whose Aladdin oven has been referred to at p. 117 *et seq.*, has recently constructed, on the same principle, "a workman's pail," measuring ten inches in height by six in diameter, including a sufficient coating

of non-conducting material, and containing a lamp, two cylindrical boxes containing oatmeal or maize meal and water, some meat to stew, etc., besides a coffee-pot, which will provide him with at least two good hot meals, without requiring any supervision, of excellent food at a very cheap rate. From his description of the apparatus, his own confidence in "his assured success," grounded on experiments made, the details of which enable me to form an opinion, I do not doubt that it may prove a valuable boon to an intelligent workman, who is not a slave to custom and prejudice. I may say that I have had opportunities of observing the dining habits of workmen, notably during the winter months, of those engaged in the streets in my own neighbourhood. Supplied with braziers containing heated coke for the purpose of their work, these are often utilized at the midday meal. An iron plate being placed thereon, a piece of meat is ruthlessly scorched, hardened until tough and juiceless, unflavoured by herb or onion, unaccompanied by vegetables—to be eaten by hand with more or less of dry bread, in alternate bites. A more wasteful cookery, if the term be applicable, and a less satisfactory result for both palate and stomach, it would be difficult to conceive. I have longed to show to them a more excellent way, but have feared that any offer to suggest one would be regarded as impertinence, or as meddlesome interference on my part.

A dinner for two persons could be easily cooked in a pail of small size, say six inches by eight, as follows:—

Six sausages	7*d.*
Oat or wheat meal to make thick porridge (better than mashed potatoes) . . .	1*d.*
Bread	1½*d.*
Coffee with milk	1½*d.*
	11*d.*

This is based on a receipt of Mr. Atkinson, altered a

little to meet English taste. The American workman uses "Indian meal," that is, maize or Indian corn ground, which is not so easily procurable here. Very little attention is required, when the method of using the apparatus has been learned, and a far more nutritious and agreeable meal is provided than the workman usually gets.

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PRINTED BY WILLIAM CLOWES AND SONS, LIMITED, LONDON AND BECCLES.

Digitized with financial assistance from the
Mr. Sangi
on 12 April, 2019